WORKING
PAPER

Evaluation of the Arkansas Tobacco Settlement Program

Program Advancement in 2005

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WR-272-1-ATSC

September 2005

Prepared for the Arkansas Tobacco Settlement Commission

HEALTH

Preface

The Tobacco Settlement Proceeds Act, a referendum passed by Arkansans in the November 2000 election, invests Arkansas' share of the tobacco Master Settlement Agreement (MSA) funds in seven health-related programs. The Act also created the Arkansas Tobacco Settlement Commission (ATSC) to monitor and evaluate the performance of the funded programs. As part of its evaluation function, the ATSC contracted with the RAND Corporation in January 2003 to serve as an external evaluator. RAND is responsible for performing a comprehensive evaluation of the progress of the seven programs in fulfilling their missions, as well as the effects of the programs on smoking and other health-related outcomes. RAND submitted its first report to the ATSC in July 2004, which presented evaluation results for the first biennium of the Tobacco Settlement program (Farley, et al., 2004).

This document is the second report from our evaluation. It documents continued activity and progress by the ATSC and the seven funded programs. First, it summarizes the history and policy context of the Tobacco Settlement funding in Arkansas and discusses the ATSC activities and its responses to recommendations by RAND in the 2004 evaluation report. Then it assesses the progress of each of the funded programs, including tracking of the process measures established for them and presentation of new long-range goals for each programs. The report also describes outcome measures developed this year to monitor effects of the funded programs on smoking and other health-related outcomes and early results from those measures. Finally, it provides both program-specific and statewide recommendations for future program activities and funding.

The contents of this report will be of interest to national and State policymakers, health care researchers and providers, and others interested in the effect of the tobacco settlement funds on the health of Arkansans.

This work was sponsored by the Arkansas Tobacco Settlement Commission under Contract No. 4500160544, for which Chiquita Munir serves as project officer.

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Summary

The Master Settlement Agreement (MSA), the historic agreement that ended years of legal battles between the states and the major tobacco companies, was signed on November 23, 1998. Under the terms of the MSA, Arkansas has an 0.828-percent share of the payments being made to participating states over the next 25 years. Arkansas is unique in the commitment made by both elected officials and the general public to invest its share of the Tobacco Settlement funds in health-related programs. The Arkansas Tobacco Settlement Proceeds Act of 2000 (referred to hereafter as the Initiated Act), a referendum passed by the voters in the November 2000 election, specifies that the Arkansas tobacco funds are to support seven health-related programs:

- Arkansas Department of Health (ADH) Tobacco Prevention and Cessation
- Medicaid Expansion Programs
- Research and Health Education (Arkansas Biosciences Institute [ABI])
- Targeted State Needs Programs – the College of Public Health (COPH), the Delta Area Health Education Center (AHEC), the Arkansas Aging Initiative (AAI), and the Minority Health Initiative (MHI).

Only one of these programs is completely dedicated to smoking prevention and cessation. Some programs are serving short-term health-related needs of Arkansas residents; others are long-term investments in the public health and health research infrastructure.

The Initiated Act also created the Arkansas Tobacco Settlement Commission (ATSC) and gave it the responsibility for monitoring and evaluating the performance of the funded programs. As part of its evaluation function, the ATSC contracted with the RAND Corporation to serve as the external evaluator. RAND was charged with performing a comprehensive evaluation of the progress of the programs in fulfilling their missions, as well as the programs' effects on smoking and other health-related outcomes.

This report is the second report from the RAND evaluation. The report updates the information and assessments provided in our first biennial report submitted to the ATSC in 2004. Using the evaluation methods described in Chapter 1 and Appendix A, the evaluation is designed to address the following four research questions:

- Have the funded programs developed and implemented their programming as specified in the Tobacco Settlement Proceeds Act of 2000?
- What factors are contributing to the programs' implementation successes or challenges?
- How do actual costs for new activities compare to the budget; what are sources of any variances?
- What effects do the funded programs have on improving the health of Arkansans?

SUMMARY OF PERFORMANCE THROUGH FISCAL YEAR 2004

Achievement of Short-Term Goals

The Initiated Act stated basic goals to be achieved by the funded programs through the use of the Tobacco Settlement funds. It also defined indicators of performance for each of the funded programs—for program initiation, short-term, and long-term actions. In the 2004 evaluation report, we reported our conclusion that the ADH Tobacco Prevention and Cessation Program, College of Public Health, Delta AHEC, Arkansas Aging Initiative, and the Arkansas Biosciences Institute had achieved their initiation goals and short-term goals.

At the same time, we reported that the Medicaid expansion program had not achieved its initiation goal, and both the Medicaid program and the MHI had not achieved their short-term goals. As of this second report, the Medicaid program still has not achieved its initiation goal because the CMS continues to refuse approval of the AR-Adults expansion program. In addition, the three operational Medicaid expansion programs continued to under-spend, although the enrollments and spending on enrollee's health care services in these programs have grown since FY2003. Therefore, we again conclude that the Medicaid program has not yet met its short-term goal of increasing participation in the expanded programs. Our finding this year is based solely on the continued low activity levels in the three operational programs, because we recognize that the AR-Adults program is not likely to obtain CMS approval.

The Minority Health Initiative has progressed since last year in accomplishing its short-term goals. Soon after completion of our 2004 report, the MHI released a list of priority health problems for African Americans; however, similar priorities for other minority populations in the state are not yet addressed explicitly in the list. We conclude now that the MHI has met this short-term goal for the African American population by establishing its initial priority list, although we encourage it to update its list to encompass issues for other minority populations. We also note that growth in enrollments in MHI programs has been slow.

We continue to believe that both the Medicaid Expansion Programs and the MHI are important components of a strategy to address the priority health needs of Arkansans. Therefore, it will be important to strengthen these programs so they can make effective use of the resources made available by the Tobacco Settlement funding for serving those needs.

Assessing Program Progress on Long-Term Goals

The Initiated Act specifies long-term goals for the programs supported by the Tobacco Settlement funds. These goals target "ultimate" outcomes for the improvement of the health and well-being of Arkansans, which are expected to take years to be accomplished. In addition, the stated goals do not have measurable endpoints that can be used to determine the extent to which programs have achieved them.

In this year's evaluation work, RAND has worked with the programs to establish measures that can be used to assess progress toward these goals. Two sets of measures have been developed: long-term programmatic goals that define the programs' vision for their future scope of activities, and outcome measures for assessing the effects of the programs on the most salient outcomes for each program. The program goals for each program are presented in Chapters 3 through 9, and the outcome measures are presented in Chapters 10 and 11. These measures for each program are brought together for ease of reference in Appendix E.

We encourage the ATSC to formally approve the programs' long-term goals, and to monitor their progress toward those goals. The monitoring should be a two-step process, starting with tracking how well programs are moving toward their operational goals, and then assessing how much effect this progress is having on their outcome measures. If those levels of operation are not affecting outcomes, then the long-term goals may have to be revised to target stronger interventions to ultimately affect outcomes.

Summary of Program Performance

Overall, the seven Tobacco Settlement programs have continued to refine and grow their program activities during the most recent year. In doing so, the programs have made a number of changes in their activities in response to the program-specific recommendations we presented in our 2004 evaluation report. In Chapters 3 through 9, we present updates on their activities, trends on their process indicators, and responses to our recommendations, and we also offer updated recommendations for future program actions based on our assessments of their current programming status.

A limited number of policy issues relative to the programs were identified in this year's evaluation. These issues are discussed below under "Policy Issues and Recommendations".

PROGRAM EFFECTS ON OUTCOMES

An important part of any evaluation the examination of the extent to which the programs being evaluated are having effects on the outcomes of interest. We assessed both effects on smoking outcomes and other program effects on non-smoking outcomes.

Program Effects on Smoking Outcomes

In last year's report we emphasized that it was too early to expect to be able to detect an impact of the Tobacco Settlement programs on smoking outcomes for a number of reasons. With every passing year, we are more likely to be able to measure an effect of the programs. With most of the programs first reaching full operation in 2002, we do not expect to be able to detect a significant impact on adult smoking prevalence until 2006 when we will have access to data for smoking behavior in 2005. This expectation is based on the experience in other states that have implemented comprehensive smoking control programs.

In spite of these limitations, we are beginning to detect an impact of tobacco control programming in vulnerable populations such as youth and pregnant women. The effects addressed here are changes in overall smoking behavior across the state's population, which are influenced collectively by the actions taken by various programs to affect this outcome, including tobacco taxes, smoke-free environment laws, the Tobacco Settlement programs, and other unidentified factors.

- Two groups of young people are smoking less since the start of the Tobacco Settlement programs than would be expected based on pre-programming trends:
    - Young adults, age 18 to 25
    - Pregnant teenagers
- Tobacco Settlement programming has successfully reduced smoking among all pregnant women.

- There has been dramatically improved compliance with laws prohibiting sales of tobacco products to minors.
- Arkansas has avoided the increase in adult smoking since 2000 that has occurred, on average, in its surrounding states. Arkansas has increased cigarette taxes and tobacco control spending over this period, while on average, the other states have not.
- Cigarette sales in Arkansas continue to decline, although the rate of decline has not accelerated since the beginning of the Tobacco Settlement programming.
- Our analysis of smoking prevalence in the Delta region shows no program impact. In fact, pregnant women in the Delta are smoking more since the beginning of Tobacco Settlement programming.
- Our analysis of the variation in smoking by county does not yet provide evidence that people who live in areas where the ADH focused their activity are less likely to smoke.

Program Effects on Non-Smoking Outcomes

Highlights of our findings regarding effects of the Tobacco Settlement programs that have a direct impact on health outcomes other than smoking are as follows:

- *Delta AHEC Teen Pregnancy Programming.* Although teen pregnancies have been decreasing throughout the state since 1995, we do not find any evidence that Delta AHEC programming accelerated this trend in the Delta.
- *Medicaid Benefits for Pregnant Women.* We continue to find evidence that the expansion of benefits for pregnant women has led to increased prenatal care. We find NO evidence that the expansion has reduced smoking among pregnant women or increased birth weights of their babies.
- *Other Medicaid Expanded Benefits.* In our analysis reported in the 2004 evaluation report, we found no clear effects for the expansion of Medicaid hospital payments or the ARSeniors program, which provides Medicaid coverage for individuals aged 65 years or older who previously did not qualify financially for Medicaid. Increased payments to hospitals for Medicaid inpatient stays have not affected hospitalization use by recipients. We are assessing the effects of ARSeniors on avoidable hospitalizations, but we will have expect that a measurable effect will not be found for several years. We will update these analyses in future reports.
- *Arkansas Aging Initiative.* Timely and appropriate outpatient care should reduce the likelihood of hospitalizations for ambulatory care sensitive conditions. We have analyzed baseline avoidable-hospitalization rates for the areas served by the COAs, and we will continue to monitor these rates in future years when sufficient time has passed that we can reasonably expect to find an impact from their activities.

PROGRAM RESPONSES TO COMMON THEMES AND ISSUES

Some common themes and issues emerged from the first evaluation cycle that apply across the programs. For those issues, we offered recommendations in the 2004 evaluation report for actions to strengthen the programs in the future. We are monitoring the progress of the programs

in carrying out these recommendations. We summarize the recommendations here, highlighting activities undertaken by the programs for each recommendation.

Collaboration and Coordination Across Programs

Collaborative activities among the programs should strengthen their ability to serve the goals of the Act, to use the Tobacco Settlement funds efficiently, and to enhance needed health services for Arkansans.

Recommendation. We encourage the programs to pursue opportunities for collaboration as their work continues.

Responses: The amount of cross-program collaboration has grown during the past year. The programs collaboration most actively thus far have been the ADH, COPH, Delta AHEC, MHI, and AAI. Examples of their collaborative activities are listed in Chapter 12. The ABI and the Medicaid expansion programs are not engaged in joint activities with other programs. Both programs differ substantially from the others, which are more oriented to public health and community education programs.

Governance Leadership and Strategic Direction

The diversity of the programs is reflected in the wide variety of governing bodies they have. The governing bodies should play active roles in guiding the future strategic direction for the programs, and they also provide important links to the environment so the program hears the views of its stakeholders and has access to vital resources it needs. Records of governance decisions and actions should be made publicly available to document their program oversight.

Recommendation. The governing boards or advisory boards of the funded programs should work with program management in defining a clear direction for the program, and should perform a constructive oversight function to ensure the program is accountable for quality performance.

Recommendation. Individuals who can provide expertise on the goals defined for the program by the initiated Act should be included in the membership of the program governing boards or advisory boards.

Responses: These recommendations are most relevant for the ADH, Delta AHEC, AAI, MHI, and ABI, all of which have some form of board, commission, or advisory groups. The COPH and Medicaid expansion programs do not have designated boards or advisory groups; we suggest they consider forming advisory groups as vehicles for eliciting community input, developing strategy on pertinent issues, and identifying potential funding opportunities.

- ADH – The Tobacco Cessation Advisory Board was created as mandated in the Initiated Act to provide oversight for the tobacco prevention and cessation program. This board is reported to be providing strong policy guidance to the program.
- ABI - The ABI board meets regularly and is reported to be closely informed on the ABI activities. The Board and staff also work to ensure they are updating and listening to the ABI advisory boards. The ABI board membership is fixed by the Initiated Act, but the advisory committee members brings a breadth of additional expertise to the program.

- AAI – The advisory boards of the regional Centers on Aging are providing the COAs with community input and access to funding opportunities. Strengthening the roles of these boards has not been a priority item for attention this year. The COAs are mixed in how they use and work with their advisory boards.
- Delta AHEC – Although its business direction derives from the UAMS AHEC system, the Delta AHEC has formed advisory boards at each of its three sites. The Helena board has been actively involved in the planning for the new AHEC building.
- MHI – A number of physicians currently serve as Commissioners for the AMHC. It is not clear whether the Commission has members with public health expertise. Two Commission seats have remained unfilled since the current executive director was hired (these are government appointments).

Monitoring and Quality Improvement

As of the end of FY2004, few of the programs had internal mechanisms for regular monitoring and providing feedback on the program's progress. Such a monitoring process, when well implemented, enables programs to perform regular quality improvement and can help the programs fulfill their external accountability to legislators and other state policy makers.

Recommendation. To monitor and improve quality and to assess program effects on health outcomes, the funded programs should have in place an ongoing quality monitoring process that has valid measures of performance, regular data collection on the measures, corrective actions to address problems, and regular reporting of data to management. The internal performance indicators and corrective actions should change over time to bring about ongoing, incremental improvements in the program operation.

Responses: The information provided by the programs on their quality improvement activities reflects the relative newness of the programs and the early status of some of their quality efforts. Three of the programs – the Delta AHEC, AAI, and MHI – currently are in the stages of establishing data systems and defining standards for performance.

The ADH has a program-wide evaluation mechanism in place that has been providing it with information for quality monitoring in the TPEP program. During this past year, the ADH has been standardize the performance and monitoring requirements for all the organizations with which it is contracting. All evaluation information collected is reported regularly to the Tobacco Cessation Advisory Board.

The COPH and ABI report that they have well-established quality management systems. The COPH has a quality improvement process because it is required for accreditation. The ABI research has been built upon already existing research programs within the participating institutions. Each university is monitoring its research activities, with reports submitted to the ABI central office.

The Medicaid expansion program does not have an active quality improvement process at this time. Such a process could be useful for ensuring the quality of the enrollment process, which could yield increased enrollments and recipients who are more informed about the programs and they benefits available to them.

Financial Management

In the 2004 evaluation report, our analysis of the spending of the Tobacco Settlement funds identified issues in two areas: budgeting for the appropriation process and the program financial management and accounting systems and capabilities.

The appropriation process and fund allocations. During the initial budgeting and appropriations process, several programs had appropriation allocations across expense classifications that did not fully match their operational needs. The initial spending constraints experienced by the programs were perpetuated in the FY 2004-05 biennial appropriations because the program leaders were reluctant to make substantial changes that might risk opening up the entire package to funding changes or reductions.

Recommendation. For the upcoming appropriations process, the state should provide the programs with clear definitions of the appropriation line items as well as guidance for the budgeting process, so that programs understand clearly how they can use funds in each line item to support their activities. In addition, the programs should restructure the budgets they submit to the state for the next appropriations process so that allocations of spending across line items reflects actual program needs and are consistent with the appropriations definitions.

Responses: The programs that were having the greatest problem with poorly allocated appropriations were the AAI, COPH, Delta AHEC, and the UAMS portion of the ABI, all of which are part of the UAMS system. UAMS submitted a proposal for reallocation of the FY2005 budgeted line items for these programs to the Peer Review Committee of the General Assembly, which approved the reallocation. For the FY2006-07 biennial appropriations, the programs modified their line item allocations as needed.

Financial management and accounting. Several of the programs are lacking in some aspect of the accounting and bookkeeping skills needed for effective financial management. Additional training and support should be provided to the programs, as needed, to strengthen their ability to document their spending and use this information to guide program management.

Recommendation. Every program should have in place a *local* automated accounting system that it uses to record expenditures as they occur and to report spending to its governance and management on a monthly basis. This system would provide the detailed financial information needed for program management that is not provided by the larger systems within which many of the programs operate (e.g. the state or UAMS financial systems). Within this system, the programs should ensure they have:

- Personnel with the relevant qualifications to perform accounting or bookkeeping functions,
- Separate accounts for each key program component;
- Monthly monitoring of program spending along with reporting of financial statements and explanations of variations from budget to the program governing body.

Responses: From a structural perspective, all of the programs are supported by well established financial systems, although multiple systems are involved. Operationally, few programs are using these accounting resources for proactive monitoring and reporting of financial data by program management and governance. In RAND's most recent analysis of program spending, we were able to obtain the needed data from the programs much more easily

than we could last year. However, for the programs with multiple components (ABI and the AAI), we still had to go to the individual components for their financial data, rather than being able to obtain it from the leadership of the overall program. We would be able to get the needed information from the program leads if the individual components were submitting regular financial statements to them. Other programs with multiple program components (e.g., Delta AHEC, MHI, and possibly COPH) do not yet appear to be establishing separate accounts for individual components.

Monitoring by the Tobacco Settlement Commission

The Tobacco Settlement Commission has an important role in ensuring the effective use of the financial resources that the Tobacco Settlement has provided to Arkansas. As the programs move forward, it will be important for the Commission to hold them to uniformly high standards of performance and results.

Recommendation. The Commission should modify the content of the regular quarterly reports from the programs to require routine reports on their progress in addressing the issues identified in this evaluation. Issues to be addressed include governing body involvement, progress in achieving goals, quality improvement activities, cross-program collaboration, and actions taken in response to evaluation recommendations.

Recommendation. The Commission should work with the state finance office and the funded programs to ensure that the programs are correcting the inadequacies of the accounting and financial management processes that this evaluation has identified.

Recommendation. To ensure that program spending is being monitored regularly, the Commission should require the programs to submit quarterly financial statements of budgeted versus actual spending. The financial statements should be in sufficient detail to enable the Commission to identify variances from budget, and explanations of variances should be provided. (These reports could be the same as those submitted to the programs' governing boards.)

Recommendation. The Commission should earmark a modest portion of the Tobacco Settlement funds ($150,000 to 200,000 each year) to establish a mechanism that makes technical support available to the funded programs. This support should be targeted to help the programs correct some of the issues identified in this evaluation.

Recommendation. The Commission should establish expectations for the performance of the governing bodies of the funded programs with respect to providing policy and strategic guidance for their programs, as well as monitoring program performance.

Recommendation. As the programs mature further, and more longitudinal information becomes available on outcomes, the Commission should ensure that outcome evaluation work continues to document the extent of those effects. Meanwhile, the Commission should interpret early outcome information with caution to ensure that conclusions regarding the programs' effectiveness are grounded on sufficient data.

Commission response: The ATSC has changed the format for the quarterly reports submitted by the programs, to incorporate the provisions listed in the recommendation. The programs are now submitting this information to the ATSC regularly, and they also are being asked to provide this information in their presentations at Commission meetings.

The ATSC office is working to develop a financial reporting format that can provide uniformity in reporting across programs. Work is proceeding carefully in this process to ensure that the format developed is useful and feasible for all the programs. It plans to begin require reporting of program financial performance after establishing the format and procedures.

The technical support function is being developed as an integral part of the ATSC strategic plan that currently is being updated and revised. The State Department of Volunteerism has been identified as a resource to draw upon as the ATSC moves forward to support technical development work by the programs. A portion of the ATSC budget is being protected to fund these activities. Also as part of its strategic planning process, the ATSC is developing plans for guidance to programs on strengthening the roles of their governing or advisory boards.

POLICY ISSUES AND RECOMMENDATIONS

As stated in the 2004 evaluation report, we reiterate here that we believe the programs supported by the Tobacco Settlement funds provide an effective mix of services and other resources that respond directly to many of Arkansas' priority health issues. With another year of operation, the programs have achieved their initiation and short-term goals defined in the Initiated Act, with but one exception. The programs' impacts on health needs also can be expected to grow as they continue to evolve and increasingly leverage the Tobacco Settlement funds to attract other resources.

Overall Recommendation Regarding Continued Program Funding. We again recommend this year that Tobacco Settlement funding continue to be provided to the seven funded programs. At the same time, performance expectations for the programs should be maintained actively through regular monitoring of trends in their process indicators, progress toward the newly establish long-term goals, and trends in impacts on relevant outcomes.

In addition to this overall recommendation, we offer the following suggestions regarding issues identified for some of the programs, for consideration by the Commission, the Governor, and the General Assembly in their policy deliberations.

Tobacco Prevention and Cessation Program

Both inadequate tobacco control policy by the State and erosion of financial resources for the ADH tobacco prevention and cessation program are weakening the ability of this otherwise well-designed and managed program to affect smoking behaviors by Arkansans. Our outcome evaluation is starting to detect reductions in smoking rates among some population groups, but these gains may not be sustained if support for this programming continues to erode. Other key components of a comprehensive tobacco-control program are legislation that bans smoking in public areas and increased taxes on tobacco products. Arkansas has increased tobacco taxes but has not been able to enact meaningful statewide bans on smoking in public places.

Recommendation: The funding share for the ADH Tobacco Prevention and Cessation Program should be increased to return its funding for tobacco prevention and cessation activities to a level that complies with the percentage share stated in the Initiated Act.

Recommendation: The General Assembly and State administration are encouraged to increase other financial resources for tobacco control programming, which should be

designed to complement the ADH programming so that existing shortfalls in CDC-recommended levels of funding for individual program components can be alleviated.

Recommendation: The State should enact additional legislation that bans smoking in public places, which would reinforce the actions already being taken by the ADH and other organizations to achieve and maintain behavior changes for Arkansans and to reduce smoking rates.

Minority Health Initiative

The MHI is uniquely positioned to address directly the health needs and priorities of the minority populations in the state. It has made progress in both programming growth and financial reporting during FY2005, and it is spending more of its available funds than it had in the previous biennium. However, issues of declining enrollments, quality problems, and extremely high unit costs have been identified for the MHI Hypertension initiative. These issues appear to be related to the structure of the contract with the Community Health Centers of Arkansas, with little accountability or financial consequences for low enrollments or inadequate clinical performance.

Recommendation. The AMHC should strengthen the MHI programming, with technical support as appropriate by the ATSC, so that its funding resources are used for cost effective programming for the health needs of minority populations.

Recommendation. As stated last year, if the MHC continues to under-spend its Tobacco Settlement funding through FY 2005, then its funding share should be reduced to the level it is spending and the unused resources should be applied to other programming that addresses the health needs of minorities.

Recommendation. If the MHI Hypertension initiative cannot achieve appropriate service volumes, quality and costs, then alternative service delivery organizations and contracting mechanisms should be considered to replace its current contract with the community health centers.

Medicaid Expansion

The intent of the Initiated Act was to use the funds to provide insurance coverage for individuals not otherwise eligible for Medicaid. The under-spending of the Tobacco Settlement funds for this program has two consequences for the state: absence of insurance coverage for people in poverty, and loss of federal funds through the Federal Medicaid matching of three dollars for every State dollar spent on health care services. The Medicaid program could reinforce the growth of enrollments and service delivery in the expansion programs by investing some of the unspent Medicaid Expansion Program funding in more extensive enrollment outreach and other activities to expand enrollments in the three existing expansion programs. Although these administrative costs have Federal match at a lower 1:1 ratio, the enrollments they generate will lead to medical care expenditures that receive the full 3:1 Federal match.

Recommendation: A portion of the appropriation for the Medicaid Expansion Program should be budgeted and used to support community outreach on the expanded benefits and education of enrollees on the health care benefits available to them.

Recommendation: The unspent Medicaid expansion funds should be put to work within the Medicaid program to cover health care services for people in need who do not meet the standard Medicaid financial requirements, to ensure that Arkansans are obtaining needed care and that the state retains the large leveraging of funds available through Federal Medicaid matches. This could be through emphasis on growth of the existing expansions or adding other Medicaid expansion options.

ATSC Management of Program Progress

During the first years of the Tobacco Settlement program, the RAND evaluation team assessed the progress of the funded programs in the startup and early operation of their activities, and we worked with the programs to establish goals and measures for monitoring their continued operation and growth. The evaluation team believes it is time now to begin to shift the role of monitoring the programs' activities away from the external evaluator into the hands of the ATSC by the end of FY2006. RAND has a responsibility to assist and support the ATSC in integrating this evaluation function into its ongoing operation. RAND will continue to serve as an objective observer of program performance reports and data on the programs' process indicators, while shifting the emphasis of its evaluation to focus more on analysis of program effects on outcomes, which requires the modeling and statistical expertise that we can best provide.

Recommendation. The ATSC should continue to work toward establishing a complete reporting package through which the funded programs provide it with performance information on both their program activities and spending, which it should use for monitoring program performance on a regular basis. This package should include quarterly reports that contain the items specified in our 2004 evaluation report, as well as quarterly financial statements, quarterly data that extend trends in the process indicators of service activity, and annual reports on progress toward long-term goals.

DISCUSSION

The Arkansas General Assembly and Tobacco Settlement Commission have much to be proud of in the investment made in the seven programs supported by the Tobacco Settlement funds. These programs continue to make substantial progress in expanding and strengthening the infrastructure to support the health status and health care needs of Arkansas residents. We have begun to observe effects on smoking outcomes, and with time, we believe the prospects are good for the programs to achieve observable impacts on other health-related outcomes over the next few years as the funded programs continue to learn and adjust to achieve full program effectiveness. To do justice to the health-related services, education, and research these programs are now delivering, they should be given the continued support and time they need to fulfill their mission of helping to significantly improve the health of Arkansans.

Arkansas has been unique among the states in being responsive to the basic intent of the Master Tobacco Settlement by investing its funds in health-related programs with a focus on reducing smoking rates. We encourage the State policymakers to reaffirm this original commitment in the Initiated Act to dedicate the Tobacco Settlement funds to support health-related programming.

Acknowledgments

We acknowledge with pleasure the thoughtful participation by numerous people in the evaluation process as RAND gathered information on the context, history, and progress of the seven funded programs initiated by the Tobacco Settlement Proceeds Act. These included the members of the ATSC, members of the State General Assembly, program directors and staff at the Department of Health, College of Public Health, Arkansas Biosciences Institute, Centers on Aging, Arkansas Minority Health Commission, Delta Area Health Education Center, and State Medicaid offices. These individuals participated in group and individual interviews, sharing their experiences in the history, context, and progress of the funded programs. They also engaged with RAND in the development of program long-range goals and outcome measures.

We would also like to acknowledge the assistance and guidance of the Arkansas Tobacco Settlement Commission during the execution of our evaluation, especially those of Chiquita Munir and General William Lefler, Commission Chair. Their support derives from a strong commitment to objective evaluation that continues to reinforce our evaluation work.

Chapter 1
Introduction

The Master Settlement Agreement (MSA) that ended years of legal battles between the states and the major tobacco companies was signed on November 23, 1998. Under the terms of the MSA, the participating states will receive more than $206 billion in payments from the tobacco companies over the next 25 years. Arkansas has a 0.828 percent share of these payments, which it has been receiving since the agreement went into effect.

The state of Arkansas is unique in the commitment that has been made by both elected officials and the general public to invest its share of the Tobacco Settlement funds in health-related programs. The Arkansas tobacco funds are supporting seven programs that provide diverse programming. Some are serving short-term health-related needs of Arkansas residents while others are long-term investments in the public health and health research infrastructure. This comprehensive program was established by the Tobacco Settlement Proceeds Act, a referendum passed by the voters in the November 2000 election.

The Act also created the Arkansas Tobacco Settlement Commission (ATSC), giving it the responsibility for monitoring and evaluation of the performance of the funded programs. As part of its evaluation function, the ATSC contracted with the RAND Corporation to serve as an external evaluator. RAND was charged with performing a comprehensive evaluation of the progress made by the programs in fulfilling their missions, as well as effects of these programs on smoking and other health-related outcomes.

This report is the second report from the RAND evaluation, which updates our findings presented in the first evaluation report submitted in July 2004 (Farley, et al, 2004). In this chapter we provide background information about the MSA, the ATSC mandate for monitoring and evaluation, and the methods used in the evaluation. Chapter 2 addresses the policy context within which the Tobacco Settlement program operates, including activities and progress of the ATSC. Evaluation results regarding the activities and progress of each of the funded programs are presented in Chapters 3 through 9. In Chapters 10 and 11 findings are presented regarding early effects of the programs on smoking and other outcomes. Finally, evaluation findings are synthesized in Chapter 12, and recommendations are offered for program improvement and future spending of the Tobacco Settlement funds.

THE MASTER SETTLEMENT AGREEMENT

The MSA settled all legal matters alleged by the participating states against the participating tobacco companies, placed conditions on the actions of the tobacco companies, and provided for large payments from those companies to the states and several specific funds. All the states except Florida, Minnesota, Mississippi, and Texas are participants in the MSA, as are the District of Columbia and several U.S. territories.

Key Provisions of the Settlement

Under the MSA, The tobacco companies are to make three types of payments to the states: up-front payments, annual payments, and the strategic contribution fund. The up-front payments total $12.7 billion, with $2.4 billion paid annually between 1998 and 2003. In addition to the

state payments, the MSA places other conditions on the tobacco companies, some involving additional payments and others placing constraints on their business practices, in particular with respect to marketing of tobacco products to youth.

The annual payments to the states total $183 billion. These payments "ramp up" over time, with payments of $4.5 billion in 2000, $5 billion in 2001, $6.5 billion in each of 2002 and 2003, and $8 billion annually in 2004 through 2007. Payments in 2008 through 2017 will be $8.1 billion annually, and payments in later years will be $9 billion annually.

Starting in 2008 and continuing through 2017, the tobacco companies will pay $861 million annually into the Strategic Contribution Fund, for a total payment of $8.6 billion. Payments to the fund will be allocated to states based on a formula developed by the Attorneys General. This formula reflects the contribution made by the states to resolution of the state lawsuits against the tobacco companies.

All the payments to the states are subject to a number of adjustments, reductions, and offsets, so the actual payments the states receive differ from the base amounts defined in the MSA. These include adjustments for inflation, volume, non-settling states' reduction, miscalculated and disputed claims offset, non-participating manufacturers, federal legislation offset, and litigation releasing parties offset.

Tobacco Settlement Funds Received by Arkansas

Arkansas received $121,548,000 from the MSA through FY2002, including both initial payments and annual payments. The amounts received in subsequent years were $62,180,000 for FY2003, $60,067,000 for FY2004, and $51,500,000 for FY2005. In April of this year, $51,000,000 was received for FY2006. Under the terms of the MSA, fund receipts to Arkansas should remain close to this level through FY2007, after which they may increase again.

When Arkansas fund receipts decline, all the funded programs share in reduction of support. Impacts of funding reductions in the first few years were limited because the programs were just building their operations and were not yet spending all of the available funds. Now the programs are at full operation and, with a few exceptions, they are using all the funding available to them. They feel the constraints of funding declines.

EVALUATION APPROACH

The ATSC Monitoring and Evaluation Function

The Initiated Act directed the ATSC to conduct monitoring and evaluation of the funded programs, to ensure optimal impact on improving the health of Arkansans and fiscal stewardship of the Tobacco Settlement. The evaluation is to assess the programs to justify continued support of the funded programs based upon the state's performance-based budgeting initiative. The Act specified the following provisions for ATSC evaluation:

- Programs are to be administered pursuant to a strategic plan that encompasses a mission statement, defined programs, program goals with measurable objectives, and strategies to be implemented over a specific timeframe.
- Evaluation of each program is to include performance-based measures for accountability that will measure specific health related results.

- All expenditures from the Tobacco Settlement Program Fund and the Program Accounts are be subject to the same fiscal control as are expenditures from State Treasury funds.
- The Chief Fiscal Officer of the State may require additional controls, procedures and reporting requirements that are determined to be necessary to carry out the Act.

RAND Evaluation Methods

The evaluation approach we have designed responds to the intent stated by the Tobacco Settlement Commission to perform a longitudinal evaluation of the development and ongoing operation of its funding program. We employ an iterative evaluation process through which information is tracked on both the program implementation processes and any effects on identified outcomes. This information can be used to inform future funding considerations by the Commission and General Assembly as well as decisions by the funded programs on their goals and operations. The evaluation addresses the following four research questions:

- Have the funded programs developed and implemented their programming as specified in the Tobacco Settlement Proceeds Act of 2000?
- What factors are contributing to the programs' implementation successes or challenges?
- How do actual costs for new activities compare to budget; what are sources of any variances?
- What effects do the funded programs have on improving the health of Arkansans?

The logic model that guides our evaluation design is presented in Figure 1.1. This model identifies a two-tiered structure for the Tobacco Settlement Commission and its funded programs, which is mirrored in the evaluation design. On the left side of Figure 1.1, the Commission itself is at the program policy level, providing advice to the General Assembly in three major areas: selection of programs to fund, definition of goals for these programs to achieve, and monitoring effects of the funded programs' activities on the program goals. The second program level is the funded programs, which perform activities to establish and carry out their work, monitor their progress toward goals, and assess their effects on outcomes of interest.

The evaluation, shown in the right side of the diagram, also consists of two levels—policy-level and program-level evaluations. Within the program evaluations, we perform a process evaluation to document the implementation processes, including relationships between the programs' goals and actions and the successes and challenges they experienced. We also perform an outcome evaluation to assess the extent to which the program interventions are achieving the intended outcomes for both program activities and the health status of the state population. This approach was taken to ensure that the evaluation of the programs is performed within the correct policy context, and that the results of the program-level evaluation are synthesized to generate usable information for future policy decisions by the Commission and the General Assembly. Further, the program evaluation results were designed to be useful to the individual programs for decisions on future program goals, strategies, and operational modifications. The evaluation components and methods are described further in Appendix A.

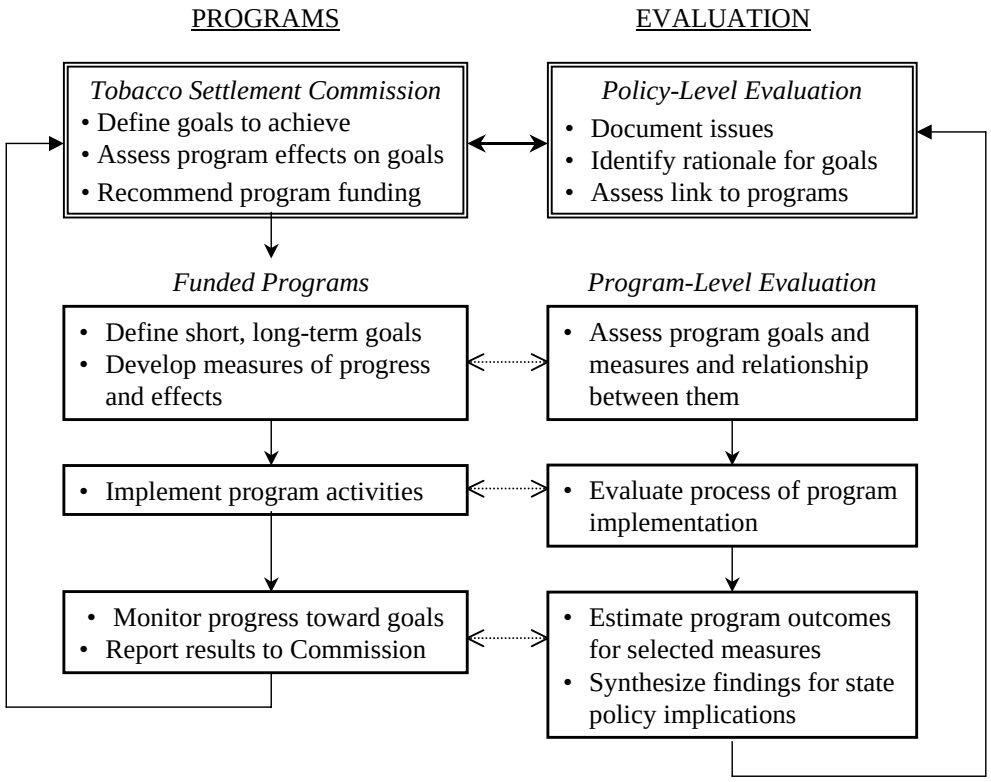

Figure 1.1 Logic Model for Evaluation of the Arkansas Tobacco Settlement Program

Implicit in this logic model is an important design principle that is central to most of the evaluations that RAND Health performs. In our view, the most effective evaluation is one that provides a vehicle for program leaders and participants to gain new knowledge that they can apply to strengthen the program for which they are responsible. We can learn from both successes and challenges in program operation. This principle is relevant to the Tobacco Settlement Commission, which has been given the responsibility to oversee the Tobacco Settlement program and advise the General Assembly and Governor on future use of this funding. It also is relevant to the individual programs supported by the Tobacco Settlement funding, which are expected to achieve the outcomes defined as priorities by the Initiated Act.

Chapter 2
History and Policy Context

To effectively assess the performance of the Arkansas Tobacco Settlement program and the work of the funded programs, the program must be considered in the context of the history and issues that contributed to decisions regarding its formation and structure. This is the topic of this chapter. We first summarize the process in Arkansas through which the Coalition for Healthy Arkansas Today (CHART) was formed, the proposal for this package of health-related programs was developed and enacted, and funding was appropriated. Then we discuss the activities of the Arkansas Tobacco Settlement Commission as it fulfills its mandate to provide oversight and monitoring of the performance of the funded programs as well as the funding of other community grants.

THE CHART PROCESS IN ARKANSAS

As the state of Arkansas prepared for use of its share of funds from the Master Settlement Agreement, active debate arose among elected officials and other policy leaders in the state. To help guide the policy deliberations, the Arkansas Center for Health Improvement (ACHI)[1] performed a study and published a position paper in February 1999 that set forth four principles to guide choices for use of the Tobacco Settlement funds (Thompson, et al., 1999;Thompson et al., 2004a; Thompson et al., 2004b)). These principles, which were accepted by the governor and the leaders of the state Senate and House, are the following:

1. All funds should be used to improve and optimize the health of Arkansans.
2. Funds should be spent on long-term investments that improve the health of Arkansans.
3. Future tobacco-related illness and health care costs in Arkansas should be minimized through this opportunity.
4. Funds should be invested in solutions that work effectively and efficiently in Arkansas.

Even within the domain of health-related issues, there were numerous proposals for use of the funds that totaled more than $350 million in annual spending, far in excess of the annual $62 million that Arkansas expected to receive in the early years. Through a negotiation process among the organizations offering proposals for health spending, and supported by data analysis by ACHI, the parties reached agreement on the seven programs to be funded and their funding shares. The Coalition for Healthy Arkansas Today (CHART) then was formed to advance the plan for passage by the state.

When the General Assembly failed to pass the CHART proposal, the governor took the proposal to the electorate in the November 2000 election as a voter-initiated referendum. The proposal was approved by a vote of 64 percent of the votes cast, the largest majority of any statewide race that year. Authorization for the funded agencies to spend the Tobacco Settlement funds then was enacted by the General Assembly in appropriations bills for the FY2001-02 biennium, which authorized spending of the funds as specified in the voter referendum.

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[1] The Arkansas Center for Health Improvement is jointly supported by the University of Arkansas for Medical Sciences and the Arkansas Department of Health.

THE ARKANSAS TOBACCO SETTLEMENT PROCEEDS ACT

The official title of the voter referendum is the Arkansas Tobacco Settlement Proceeds Act of 2000 (which we refer to in this report as the Initiated Act). This Act authorized the creation of seven separate initiatives to be supported by Tobacco Settlement funds, established short and long-term goals for the performance of these initiatives, specified the funding shares to support the programs and a structure of funds for management and distribution of proceeds, and established the Arkansas Tobacco Settlement Commission to oversee the overall program.

Overall Goals for the Funded Programs

The Initiated Act defined four basic goals to be achieved through the use of the Tobacco Settlement funds, for each of the four major types of programs funded. These goals are:

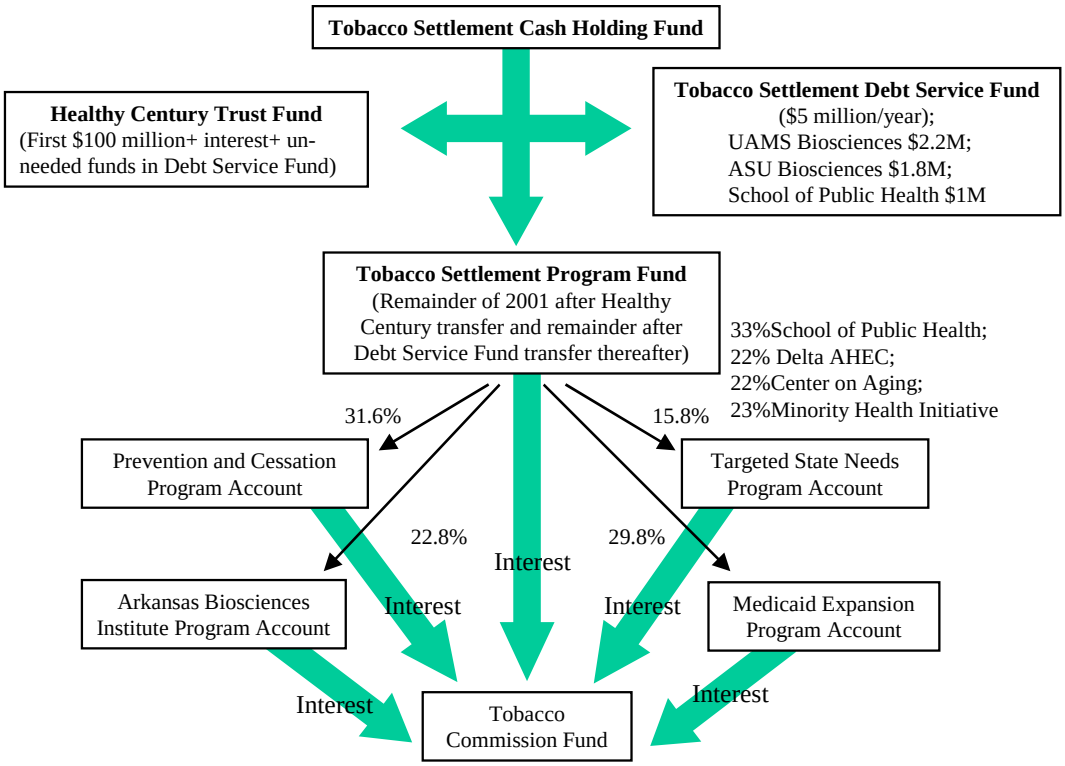
- ***Tobacco Prevention and Cessation.*** To reduce the initiation of tobacco use and the resulting negative health and economic impact.
- ***Medicaid Expansion.*** To expand access to healthcare through targeted Medicaid expansions thereby improving the health of eligible Arkansans.
- ***Research and Health Education (Arkansas Biosciences Institute)***. To develop new tobacco-related medical and agricultural research initiatives to improve the access to new technologies, improve the health of Arkansans, and stabilize the economic security of Arkansas.
- ***Targeted State Needs Programs.*** To improve the health care systems in Arkansas and the access to health care delivery systems, thereby resolving critical deficiencies that negatively impact the health of the citizens of the state. These programs consist of the College of Public Health (COPH), the Delta Area Health Education Center (AHEC), the Arkansas Aging Initiative (AAI), and the Minority Health Initiative (MHI).

Long-Term Performance Expectations for the Funded Programs

In addition to the overall goals, the Act defined indicators of performance for each of the funded programs—for program initiation, short-term, and long-term actions. In the 2004 evaluation report, we assessed the performance of the seven programs on their initiation and short-term indicators. It is premature to draw conclusions regarding the performance of the programs on their long-term performance indicators because, as discussed in Chapter 10, it is still too early in the life of the programs to expect to observe effects on many measures of health behaviors or health status. Refer to Chapter 12 for discussion of long-term performance goals.

Funding and Fund Flows

The Act authorized the State Board of Finance to receive all disbursements from the MSA Escrow and to oversee the distribution of the funds as specified in the Act. The fund structure and distribution of funding shares by programs are displayed graphically in Figure 2.1. The MSA disbursements are deposited into the Tobacco Settlement Cash Holding Fund, from which funds are to be distributed to other funds. The other funds consist of the Tobacco Settlement Debt Service Fund, the Arkansas Healthy Century Trust Fund, the Tobacco Settlement Program Fund, the Arkansas Tobacco Settlement Commission Fund, and the Program Accounts.



SOURCE: Arkansas Bureau of Legislative Research; Fiscal Review Division

Figure 2.1 Flow of Master Settlement Funds Received by Arkansas, As Defined in the Tobacco Settlement Proceeds Act of 2000

In calendar year 2001, $100 million of the first MSA funds received were to be deposited in the Arkansas Healthy Century Trust Fund (which was done). This Trust Fund is intended to serve as a long-term resource to support health-related activities. Interest earned by the Fund may be used to pay expenses related to the responsibilities of the State Board of Finance, as well as programs and projects related to health care services, health education, and health-related research as designated in legislation adopted by the General Assembly. The remainder of the 2001 MSA disbursements were to be deposited into the Tobacco Settlement Program Fund and distributed to the funded programs pursuant to the shares of the funds defined for them.

For each subsequent year, beginning in 2002, all MSA disbursements were to be deposited in the Tobacco Settlement Cash Holding Fund. The first $5,000,000 in funds were to be transferred to the Tobacco Settlement Debt Service Fund, to pay the debt service on bonds for three capital improvement projects (debt service limits shown in Figure 2.1) for the University of Arkansas for Medical Sciences, Biosciences Research Building, the Arkansas State University Biosciences Research Building, and the School of Public Health. After paying the Debt Service Fund, the remaining amounts are to be transferred to the Tobacco Settlement Program Fund for distribution to program accounts for the funded programs, as shown in Figure 2.1.

The programs have both years of each biennium to spend the Tobacco Settlement funds they receive, i.e., they are allowed to carry over unspent funds from the first to the second year.

Any funds that remain unspent at the end of the biennium are returned to the Tobacco Settlement Program Fund, and then are redistributed across all the funded program according to the percentage distributions of funding established within the Act. The Medicaid expansion program is an exception to this provision because it has delayed payments of claims for health care costs incurred (TSA of 2000, section 8(e)).

The State Board of Finance is to invest all moneys held in the Tobacco Settlement Program Fund and the Program Accounts. Interest earned on funds in the Tobacco Settlement Program Fund are to be used to pay the expenses of the ATSC, and are to be transferred to the ATSC on July 1 of each year.

If the deposits into the Arkansas Tobacco Settlement Commission Fund exceed the amount necessary for ATSC expenses, then the ATSC is authorized to make grants to non-profit and community based organizations for activities to improve and optimize the health of Arkansans and to minimize future tobacco-related illness and health care costs in Arkansas. Grant awards may be made up to $50,000 per year for each eligible organization, and funds are to be invested in solutions that work effectively and efficiently in Arkansas.

Subsequent Emergency Provisions for Medicaid Program Shortfalls

Within a year following the Tobacco Settlement appropriations, Arkansas experienced a budgetary crisis that put the state Medicaid program at serious risk. In a special session in 2002, the General Assembly declared an emergency and made two changes to the Initiated Act that would provide emergency funding for the Medicaid program to mitigate the threat to its ability to provide adequate care to the state's neediest citizens.

The first change was a modification of the Medicaid Expansion Program Account so that funds in that account also could be used to supplement current general Medicaid revenues, if approved by the Governor and the Chief Fiscal Officer of the State for the Arkansas Medicaid Program. Funds could not be used for this purpose, however, if such usage reduced the funds made available by the General Assembly for the Meals-on-Wheels program and the senior prescription drug program.

The second change was the funding of an Arkansas Rainy Day Fund by shifting the first year of funds out of the Tobacco Prevention and Cessation Program Account. The purpose of the Rainy Day Fund is to make moneys available to assist the state Medicaid program in maintaining its established levels of service in the event that the current revenue forecast is not collected. As a result of this shift in funds, the ADH was placed in the position of borrowing funds to support its tobacco prevention and cessation activities, which then are repaid in the next cycle of Tobacco Settlement funds (see Chapter 3 for additional details).

APPROPRIATIONS FOR THE FUNDED PROGRAMS

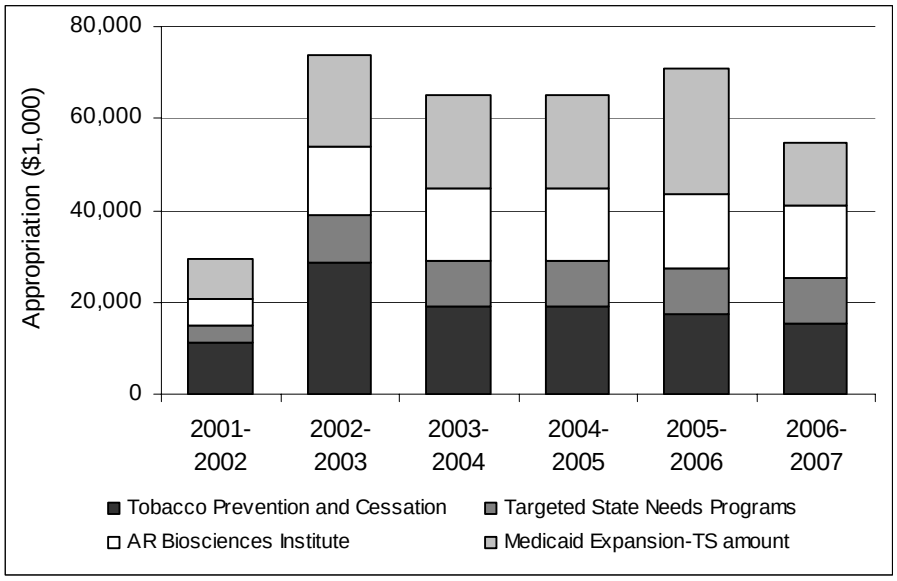
The Arkansas General Assembly has passed three biennial appropriations for the Tobacco Settlement program since the program’s inception in FY2002 (July 2001). As shown in Table 2.1, partial appropriations were authorized for the first year, after which appropriations increased and stabilized at full levels in subsequent years. The three programs receiving the largest funding are the ADH Tobacco Prevention and Cessation program, the Medicaid Expansion, and the Arkansas Biosciences Institute. Each of the remaining programs had annual appropriations ranging from $2 million to $3.5 million.

The ADH program had the largest funding in the first appropriations, amounting to $29 million in FY2003. The ADH appropriation then dropped to $19 million annually in FY2004 and FY2005, and in the most recent appropriation, it has declined further to $17.5 million in FY2006 and $15.2 million in FY2006-07. At the same time, the ABI appropriations remained steady across years at $15.7 million, including the most recent appropriations for FY2007.

The appropriations for the Medicaid Expansion at the top of Table 2.1 represent just the share covered by the Tobacco Settlement funds. After fairly stable appropriations through FY2005, the Medicaid appropriation for the third biennium increased to $27.6 million for FY2006 and decreased to $13.8 million for FY2007. The Tobacco Settlement funding for Medicaid is leveraged by federal matching at a rate of three dollars for every state dollar for costs of medical services and a one-to-one match for program administration costs. This match is shown in the "Medicaid appropriations breakdown" section of the Table.

Four separate appropriations are enacted each year for the ABI, one for each participating educational institution. The fifth institution, the Arkansas Children's Hospital Research Program (ACH), is a line item in the University of Arkansas for Medical Sciences (UAMS) appropriation. The appropriations for each institution are presented at the bottom of Table 2.1.

The distribution of the appropriations across programs is shown graphically in Figure 2.2. The first year appropriation is only 40 percent of the FY20003 appropriation. This graph shows clearly the dominant shares of the appropriations for the three largest programs. The four Targeted State Needs programs together have only 16 percent of the total Tobacco Settlement appropriations through FY2005, and their share decreases to 14 percent in FY2006 and then increases to 18 percent by FY2007.



Note: Targeted state needs programs consist of the College of Public Health, Delta AHEC, Arkansas Aging Initiative, and Minority Health Initiative

Figure 2.2 Distribution of Annual Tobacco Settlement Appropriations Across Funded Programs

Table 2.1 Appropriations for the Tobacco Settlement Commission and the Programs Supported by the Tobacco Settlement Funds

Funded Program	Arkansas Fiscal Year 2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
The Tobacco Settlement Commission	$ 2,426,413	$ 2,431,841	$ 2,416,852	$ 2,428,978	$ 638,097	$ 640,711
Tobacco Prevention and Cessation (ADH)	$11,005,529	$28,615,452	$18,978,661	$19,022,305	17,451,384	15,179,036
College of Public Health	1,282,026	3,324,975	3,486,713	3,486,713	3,486,713	3,486,713
Delta AHEC	869,000	2,259,400	2,324,475	2,324,475	2,324,476	2,324,476
Arkansas Aging Initiative	869,000	2,259,400	2,324,476	2,324,475	2,324,476	2,324,476
Minority Health Initiative	908,500	2,362,100	2,012,005	2,016,435	1,966,515	1,971,522
Arkansas Biosciences Institute	5,950,000	15,076,504	15,764,858	15,764,858	15,764,858	15,764,858
Medicaid Expansion (Tobacco Settlement)	8,693,597	19,933,644	20,063,501	20,086,859	27,554,055	13,832,729
Total appropriations for programs	29,577,652	73,831,475	64,954,689	65,026,120	70,872,477	54,883,810
Medicaid Appropriations Breakdown:						
Tobacco Settlement funding	8,693,597	19,933,644	20,063,501	20,086,859	27,554,055	13,832,729
Matched federal funding	24,294,535	57,848,254	57,978,111	58,001,469	80,268,426	39,047,100
Ratio federal match to Tobacco Settlement	2.8	2.9	2.9	2.9	2.9	2.8
Arkansas Biosciences Institute breakdown:						
AR State University	1,643,880	4,274,088	4,915,202	4,915,202	4,915,202	4,915,202
Children's Hospital Research Program	767,220	1,994,772	1,994,772	1,994,772	2,052,205	2,052,205
Remainder of UA for Medical Sciences	1,784,440	4,246,044	4,161,904	4,161,904	4,104,471	4,104,471
UA Fayetteville	877,230	2,280,800	2,346,490	2,346,490	2,346,490	2,346,490
UA Division of Agriculture	877,230	2,280,800	2,346,490	2,346,490	2,346,490	2,346,490
Total ABI appropriations	5,950,000	15,076,504	15,764,858	15,764,858	15,764,858	15,764,858

LEGISLATIVE ACTIVITY AFFECTING THE TOBACCO SETTLEMENT PROGRAM

The General Assembly held its 85th session during FY2005, during which several bills were filed that could or did affect the Arkansas Tobacco Settlement program. These included several bills to establish smoke-free public places, a bill to use interest earned on Tobacco Settlement funds to support services by community health centers in the state, and a bill to merge the State Departments of Human Services and Health.

As discussed in the 2004 evaluation report, and again in this report, state-level legislation controlling use of tobacco products in public places is an important "leg on a three-legged stool" in which the other legs are tax increases on tobacco products and tobacco prevention and cessation programs. The state legislature voted to increase cigarette taxes to 59 cents per pack in June 2003. While this represents a substantial increase from 34 cents per pack in July 2001, Arkansas is ranked 29th in the US and its tax rate is below the national average of 84.5 cents per pack. Making cigarettes more expensive, through increased taxes, continues to be an effective way to reduce and prevent tobacco use (Tauras, 2004; Emery et al., 2001; Harris & Chan, 1998).

During the 85th Session of the Arkansas General Assembly, several bills were filed that would establish stronger rules for smoke-free environments in the state. As shown in Table 2.2, however, only one of the bills was enacted. The new Act 135 now prohibits use of tobacco products in or on the grounds of medical facilities. The strongest bill was HB1390, which would have prohibited sale or use of tobacco products in all public places. This bill died in House committee. The remaining three bills, which would have prohibited smoking in food service establishments, county-owned facilities, or state buildings, failed in House votes. Laws such as these have been found to reduce tobacco use.

Table 2.2 Smoke-Free Environment Bills Proposed in the 85th Session of the Arkansas General Assembly

Bill Number	Status of Bill	Name of Bill
HB 1193	Enacted (Act 135)	Prohibit the use of tobacco products in and on the grounds of all medical facilities in Arkansas
HB 1390	Died in committee	Prohibit the sale of tobacco products and prohibit the use of tobacco products in public
HB 1883	Failed in House	Protect the health of the citizens of Arkansas; ban the smoking of tobacco products in food service establishments in Arkansas.
HB 2056	Failed in House	Prohibit smoking in county-owned facilities
HB 2684	Failed in House	Prohibit smoking in or near state buildings

Also during the 85th session, the Community Health Centers of Arkansas sought state funding to help support the services delivered through sub-grants to Community Health Centers for provision of primary medical, dental, mental health, pharmacy and preventive services targeted to the uninsured and the underinsured Arkansans in medically underserved areas. Its original proposal, delineated in HB 1906, would have used $4 million in interest earned on the Tobacco Settlement funds invested in the Arkansas Healthy Century Trust Fund to create a Community Health Centers of Arkansas Fund to support these services. This bill did not pass,

dying in House committee. An alternative bill (HB 1907) did pass, becoming Act 2309, which appropriated $5 million in general funds to support these services.

Another major action taken by the General Assembly during the 85th session was the merger of the Department of Health into the Department of Human Services, creating the newly named Department of Health and Human Services. These actions were taken in Act 1954, passed in April 2005, the stated goals of which are to: "(1) improve the health of the citizens of Arkansas in an effective and efficient manner; and (2) Provide for administrative cost savings in the delivery of health-related programs by combining overlapping functions and eliminating duplications of functions of the Department of Health and the Department of Human Services."

The Department of Health will be the Division of Health within the new department. In addition, the State Board of Health was transferred to the new Department of Health and Human Services. This consolidation of the two departments has direct implications for the Tobacco Settlement Commission because the two directors of the formerly separate departments are members of the Commission by virtue of their offices.

THE TOBACCO SETTLEMENT COMMISSION

The Arkansas Tobacco Settlement Commission is directed by the Initiated Act to conduct monitoring and evaluation of the funded programs "to ensure optimal impact on improving the health of Arkansans and fiscal stewardship of the Tobacco Settlement" and "to justify continued support based upon the state's performance-based budgeting initiative." Regular quarterly meetings of the Commission have been held since its inception. In addition, special meetings have been scheduled when needed to carry out its functions effectively. For example, special meetings were scheduled for the Commission to review and act on community grants that were awarded in 2003 and 2004. All of these meetings have been held in compliance with the state requirements for public meetings and related notices.

The work of the ATSC is guided by its strategic plan, which it has established pursuant to requirements of the Initiated Act (ATSC, 2004). This plan is currently under review and revision by the Commission, to establish a strategy to monitor and provide technical support for the funded programs.

ATSC Monitoring and Evaluation Activities

The Initiated Act directs the ATSC to develop measurable performance indicators to monitor programmatic functions that are state-specific and situation-specific and to support performance-based assessment for governmental accountability. Progress with respect to these performance indicators is to be reported to the Governor and the General Assembly for future appropriation decisions. The commission is to modify these performance indicators as goals and objectives are met and new inputs to programmatic outcomes are identified.

On August 1, 2002, the ATSC submitted to the General Assembly and the Governor a biennial report that reviewed the early progress of the funded programs in the first 12 months after receipt of Tobacco Settlement funding (July 2001–June 2002). Its assessment focused on indicators for program initiation, which are stated in Section 18 of the Act (ATSC, 2002). The ATSC recommendations for future appropriations were based on the following considerations:

- Reported performance compared with initiation indicators only.

- Recognition that most program components within the Act are new programs requiring a period of deployment before short- and long-term objectives can be achieved.
- All programs received partial funding during the first year.

In its first report, the ATSC offered recommendation regarding future appropriations for the programs. The ATSC recommended continued funding with no conditions for five of the seven programs, based on findings that the programs had been initiated successfully. It recommended "continued funding with concerns" for the ADH Tobacco Prevention and Cessation program and the Minority Health Initiative.

The Initiated Act authorized the ATSC to hire an independent contractor to perform monitoring and evaluation of the program. The product of this evaluation is to be a biennial report to be delivered to the General Assembly and the Governor by August 1 preceding each general session of the General Assembly. The report is to be accompanied by a recommendation from the commission as to the continued funding for each program.

As specified in the Act, the ATSC contracted with the RAND Corporation to perform the evaluation program, including tracking of expenditures made from the program accounts. The contract was effective January 1, 2003 for a two-year term, which was extended another two years for 2005-06. This report is the second evaluation report, which presents an update to the first evaluation report submitted in 2004, covering recent program activities, spending, program responses to recommendations, and assessments of the programs' outcomes.

Responses to Recommendations for the Commission in the 2004 Evaluation Report

The Tobacco Settlement Commission has an important role in ensuring the effective use of the financial resources that the Tobacco Settlement has provided to Arkansas. As the programs move forward, it will be important for the Commission to hold them to uniformly high standards of performance and results. In Chapter 12 of the 2004 evaluation report, RAND made several recommendations for ATSC actions to help strengthen its role in oversight, support, and evaluation of the programs receiving Tobacco Settlement funding. We summarize here the actions taken by the ATSC in response to each of our recommendations.

Recommendation. The Commission should modify the content of the regular quarterly reports from the programs to require routine reports on their progress in addressing the issues identified in this evaluation. Issues to be addressed include:

1. involvement of the programs' governing body (or advisory boards) in guiding program strategy and priorities
2. specific progress of the programs in achieving the goals and objectives of their strategic plans,
3. actions being undertaken for continuous quality improvement and progress in improving services, and
4. actions being taken for collaboration and coordination among programs to strengthen programming.
5. the specific issues identified in the recommendations at the end of each program's chapter in this report.

Commission response: The ATSC has changed the format for the quarterly reports submitted by the programs, to incorporate the provisions listed in the recommendation. The programs are now submitting this information to the ATSC regularly, and the programs also are being asked to provide this information in their presentations at Commission meetings. The ATSC plans to increase its use of forums designed to enhance interactions between Commission members and the programs to ensure both accountability and support for continuous strengthening of the programs. For example, the Commission meeting locations are now being rotated among the locations of the programs based in Little Rock.

Recommendation. The Commission should work with the state finance office and the funded programs to ensure that the programs are correcting the inadequacies of the accounting and financial management processes that this evaluation has identified.

Commission response: The ATSC office is working to develop a financial reporting format that can provide uniformity in reporting across programs. For example, the possibility is being explored for the state financial reporting system to provide the same reports for all the programs that are part of this system. Work is proceeding carefully in this process to ensure that the format developed is useful and feasible for all the programs. In addition, the ATSC office has been monitoring actions by the programs to correct problems with inaccurate allocation of funds across appropriations line items, which has been accomplished.

Recommendation. To ensure that program spending is being monitored regularly, the Commission should require the programs to submit quarterly financial statements of budgeted versus actual spending. The financial statements should be in sufficient detail to enable the Commission to identify variances from budget, and explanations of variances should be provided. (These reports could be the same as those submitted to the programs' governing boards.)

Commission response: Action has not yet been taken on this recommendation by the ATSC, because it first needs to establish an acceptable uniform financial statement format that can be used by all the programs. As discussed under the previous recommendation, this development work in underway, with plans to begin require reporting of program financial performance when the format and procedures have been established.

Recommendation. The Commission should earmark a modest portion of the Tobacco Settlement funds ($150,000 to 200,000 each year) to establish a mechanism that makes technical support available to the funded programs. This support should be targeted to help the programs correct some of the issues identified in this evaluation.

Commission response: The technical support function is being developed as an integral part of the ATSC strategic plan that currently is being updated and revised. The State Department of Volunteerism has been identified as a resource to draw upon as the ATSC moves forward to support technical development work by the programs. This department is helping to identify what the programs need in the way of technical support by conducting a needs assessment. A portion of the ATSC budget is being protected to fund these activities.

Recommendation. The Commission should establish expectations for the performance of the governing bodies of the funded programs with respect to providing policy and strategic guidance for their programs, as well as monitoring program performance.

Commission response: This issue is being considered by the Commission as part of its strategic planning process, so it has not yet provided the programs any written expectations for how they are to strengthen the roles of their governing bodies. It is a complex area, given the diversity of boards, commissions, and advisory groups that the various programs have.

Recommendation. As the programs mature further, and more longitudinal information becomes available on outcomes, the Commission should ensure that outcome evaluation work continues to document the extent of those effects. Meanwhile, the Commission should interpret early outcome information with caution to ensure that conclusions regarding the programs' effectiveness are grounded on sufficient data.

Commission response: In addressing the anticipated effects of the funded programs on health-related outcomes for Arkansans, the ATSC thus far has been relying on the RAND evaluation to provide the data and assessment of outcome trends. In testimony and discussions with legislators, the Commission members and staff have emphasized that it will take time to begin to see outcomes. As information emerges about program outcomes, the ATSC is gearing up to communicate the information proactively to leaders and citizens of the state.

Community Grants

According to the Initiated Act, if the deposits into the Arkansas Tobacco Settlement Commission Fund exceed the amount necessary to pay its expenses, then the ATSC may make grants to support community activities. Funded activities must meet the following criteria:

- Organizations must be nonprofit and community based;
- Proposals should be reviewed using grant based upon the following principles:
  - All funds should be used to improve and optimize the health of Arkansans;
  - Funds should be spent on long-term projects that improve the health of Arkansans;
  - Future tobacco-related illness and health care costs in Arkansas should be minimized through this opportunity; and
  - Funds should be invested in solutions that work effectively and efficiently in Arkansas; and
- Grant awards are to be restricted to amounts up to $ 50,000 per year for each eligible organization.

In FY2004, the ATSC awarded its first set of 16 grants under this provision for a total of $353,678 in grants to community organizations. The ATSC set an upper limit of $25,000 for each grant, with actual grants awarded ranging in amounts from $5,000 to $24,998.

In the second round of community grants, awarded in FY2005, the ATSC funded 22 grants for a total of $487,522, with amounts ranging from $8,000 to $24,998. The grants awarded for FY2005 are shown in Table 2.3.

The ATSC established a requirement of quarterly reporting for the community grants, including both provision of information on progress, challenges, and successes in implementing the funded activity and reporting on grant expenditures. Each year, a small number of the grantees failed to carry out their activities, and some proceeded more slowly than planned. The

ATSC monitors these issues, and when necessary, it discontinues grants for programs that were not carrying out the funded activities.

Because the ATSC plans to use some of its available funds for technical support to the seven funded programs, it is not awarding new community grants for FY2006. Instead, it is identifying a small number of the grants funded for FY2005 that are performing well in serving community needs, to which it will provide additional funding for continued support of their development work. Using information in the progress reports submitted by the grantees, with some assistance from the RAND evaluation team, the ATSC has identified some candidate programs for additional support. In offering the continuation funding, it will ask each grantee to submit a work plan for the next year of work that is to include a list of measurable outcomes expected to be achieved from the grantee's community activities.

Table 2.3 Community Grants Awarded by the ATSC for FY2005

Program Funded	Grant Amount
Youth Media Training and Cessation Support	$ 24,998
Murfreesboro Nutrition	11,770
Lighted Walking Trail	20,000
Healthy Lifestyles	24,998
Enhancing Healthier Lifestyles	24,340
Student Tobacco Objection (STOMP)	15,548
Know Your Numbers	24,260
Oral Cancer Screening	24,998
Breathe Easy	24,212
Kids for Health Video	24,998
St. John's Nicotine Addiction Treatment	20,790
CHOICES	24,165
QUIT	24,533
Good Samaritan Clinic	24,998
Healthy Boone County	24,998
Healthy Hampton	8,000
Move It or Lose It	24,993
Empowering Arkansans to Optimize	24,998
Community Cares Christian Drug Program	24,998
UALR – You Know You Want To	24,998
Asthma Med Camps	21,280
White River Youth Tobacco Prevention	18,649
Total funding for community grants	$487,522

Chapter 3
Tobacco Prevention and Cessation Program

UPDATE ON PROGRAM ACTIVITIES

The Arkansas Department of Health's programming has been established according to the nine program components of what the CDC recommends for statewide tobacco control programs (CDC, 1999a). Below are brief updates by each one of these programs.

Community prevention programs that reduce youth tobacco use – The 30 funded community coalitions continue to provide a significant amount of education to a wide range of audiences about the dangers of smoking and second hand smoke. The coalitions have been able to partner with schools, churches, universities, hospitals, businesses, and a variety of media channels in order to disseminate anti-tobacco messages. The coalitions have also been active in trying to strengthen anti-tobacco policies in schools, businesses, hospitals, public festivals, and whole cities.

Local school education and prevention programs in K-12 – Similar to the community coalitions, the school grantees have been working in schools to establish and strengthen infrastructure for tobacco prevention. This includes strengthening school policies, implementing evidence-based tobacco prevention programs, promoting and referring to cessation services, and using media to disseminate anti-tobacco messages.

Enforcement of youth tobacco control laws – The Arkansas Tobacco Control Board (ATCB) continues to conducts compliance checks, with over 7,500 done in 2004. These checks are both new and follow-ups from complaints the ATCB receives or re-checks of previous violators. In addition, the ATCB has been providing education to merchants about how to be in compliance with the law (34 stores in 2004).

State-wide programs with youth involvement to increase local coalition activities – The two statewide coalitions--Coalition for Tobacco Free Arkansas (CTFA) and Arkansans for Drug Free Youth (ADFY)—continue to be active in pursuing their respective anti-tobacco goals. ADFY has been cultivating a state-level group of youth, called the (Tobacco Control Youth Board, also known as Arkansans For A Drug Free Youth's Y.E.S. Team) to implement a multi-faceted, statewide anti-tobacco media campaign in collaboration with a Little Rock media agency. The CTFA, with support from American for Non-Smokers' Rights, continues to provide education and support local efforts to pass anti-tobacco ordinances.

Tobacco cessation programs – The free Quitline (1-866-NOW-QUIT) operated by the Mayo Clinic and the AR Foundation for Medical Care (AFMC) provided science-based cessation counseling and pharmaceutical interventions to over 2,300 Arkansans in 2004, obtaining good quit rates.

Tobacco related disease prevention programs – The Arkansas Cancer Coalition used ADH funds to support the UAMS Smoke-Free Task Force's efforts to pave the way for implementing a completely smoke free campus at the University of Arkansas Medical School beginning July 4, 2004. The Task Force program was a multi-component program that included staff smoking cessation services and adherence training; and the Cancer Coalition's grant helped support non-smoking signage and a paging system to allow visitors to smoke off campus.

Public awareness and health promotion campaign – ADH continued to work with the media agency Cranford, Johnson, Robinson, Woods (CJRW) to reinforce initiatives on smoking and second-hand smoke through print, radio, TV media, partnerships, and by sponsoring local events around the state. This included distributing materials to schools ("school kits"), libraries ("Library Program Kits"), and clubs ("speaker kits") to facilitate education; sponsoring drama, coloring, and essay contests that received media attention; and partnering with local sports teams, museums, festivals, concerts, and amusement parks. In June 2004, a redesigned Stamp Out Smoking (SOS) website was relaunched that includes youth-oriented information and activities such as tobacco fact sheets, trivia quizzes, coloring sheets, a tell-your-story section, videos and an ad gallery. It also has information for parents, community partners and medical professionals and is available in Spanish. The website has received several awards.

Minority initiatives – The ADH funds the University of Arkansas at Pine Bluff (UAPB) to administer the Masters of Science in Addiction program and the Minority Initiative Sub-Recipient Grant Office (MISRGO). The Addiction Studies program has graduated all 21 students from its first class, of which 16 have obtained addiction jobs in AR. It also continues to develop its program and has filled all its faculty vacancies. The MISRGO awarded 24 minority community-based grants for FY 04 and 22 will be awarded in FY 05. Targeting minority communities, these grants provide education on the effects of second-hand smoke; reduce youth access; decrease advertising and promotion of tobacco products and promote the utilization of cessation. MISRGO hired a new evaluator who is focusing on building grantee capacity to conduct self-evaluation.

Monitoring and evaluation –ADH has contracted with the Gallup Organization to provide ongoing evaluations of the specific program activities. Gallup conducted two statewide surveys in 2004, one of restaurants and the other of college students. The former found that half of the restaurants ban smoking and most would support a statewide ban. The latter found that almost all colleges ban smoking inside campus buildings and many offer cessations services. No college sells tobacco or has had an event with a tobacco sponsor. Gallup also provided trainings to community coalitions on evaluation and has been working with ADH to implement its coalition evaluation tracking system.

RESPONSES TO EVALUATION RECOMMENDATIONS IN THE 2004 REPORT

Recommendation: Funding levels for the nine components of a comprehensive statewide tobacco control strategy should be raised to the minimums recommended by the CDC for Arkansas.

Program response: The ADH continues to receive less tobacco funding than specified by the CDC funding criteria for Arkansas. While the community programs and statewide coalitions components received adequate funding, chronic disease, school programs, counter marketing, enforcement, cessation, and monitoring and evaluation continue to be underfunded according to the CDC funding guidelines established for Arkansas. The decisions regarding overall appropriations are not under the control of ADH and are in large part due to efforts by the state legislature to redirect funding to other health concerns. In addition, the ADH did not spend all its funding, in part because its spending is complicated by its having to borrow ahead.

Recommendation: Funded programs that are not within the scope of tobacco prevention and cessation programming, as defined by the CDC guidelines, should be re-evaluated for their value in contributing to reduction of smoking and tobacco-related disease.

Program response: Programs that are not related to tobacco—Breastcare, Act 1220, Trails for Life, the Addiction Studies program at University of Arkansas at Pine Bluff, and Healthy Arkansas—continue to be supported with tobacco funding. While these programs do address important health issues in Arkansas, using tobacco funding to do so weakens the anti-tobacco effort.

Recommendation: Provide the community coalitions more assistance in planning and evaluating their activities.

Program response: The ADH and its contractors has sponsored nine trainings on a variety of topics relevant to tobacco control in 2004 such as pursuing clean indoor air, the difference between lobbying and education, and conducting outcome evaluation.

Recommendation: Provide technical assistance and evaluation feedback to the schools in the educational cooperatives to move them to full compliance with the CDC best practice guidelines for schools.

Program response: The Community School Health Nurse Specialists hired by ADH's tobacco funding continues to provide support to the schools in order to increase compliance with the CDC's school guidelines. This has included providing sample school policies to school officials and making anti-tobacco presentations directly to students, and providing teacher training. The training varied in intensity, ranging from making printed materials available and having informal discussion to more formal training sessions on specific evidence-based prevention curriculum. Finally, it is not clear what level of evaluation assistance the Nurse Specialists are providing. Some report they are working with the schools to assess whether the schools are implementing the curriculum that was purchased. Some Nurse Specialists reported that the demands of Act 1220 (conducting a Body Mass Index assessment of every Arkansan public school student) made less time for tobacco efforts.

Recommendation: Provide the ATCB additional financial resources to conduct merchant education.

Program response: While no additional funds were allocated to the ATCB for education, they were able to provide and document 24 merchant education sessions involving 34 stores and approximately 150 employees. Their efforts also are increasing. Already in the first three months of 2005, the ATCB has conducted a greater number of training sessions reaching over 400 employees. ATCB is working through legislation to raise licensing fees to raise more funds. They are also restructuring their FY 2006 contract with ADH to slightly reduce the number of inspections to make additional funds available for merchant training. Finally, the FY 06 TPEP Media Contractor will assist with making a training video to be used by ATCB officers.

Recommendation: Place stronger expectations on the statewide coalitions to evaluate their activities and the effects they are having across the state.

Program response: While the statewide coalitions are active and do report on their individual objectives specified in their work plans, they do not appear to be assessing the impact of all of their activities on their ultimate outcomes (i.e., reducing tobacco use). Activities such as the ADFY's Tobacco Control Youth Board media campaign, the trainings of Boys and Girls

Clubs in Get Real about Tobacco curriculum, and the impact of the youth boards created around the continue not to be evaluated. CTFA has been tracking the passage of local anti-tobacco ordinances. To address this, ADH is training both ADFY and CTFA to use the new web-based reporting system. In utilizing this system, they will have the capability to input quarterly activities and data linked to their objectives while using the Gallup coding mechanism. Then, ADH will review and submit each report to the Gallup Organization and RAND. Finally, in their FY 2006 contracts, ADH will require both ADFY and CTFA to have a program evaluation. Already, ADFY has negotiated with a person from University of Arkansas at Little Rock to do their evaluation.

Recommendation: Additional resources should be provided to the smoking cessation programs to help them expand and improve in specific areas they have been found to be limited, including pharmacotherapies for the AFMC and advertising of the Mayo Quitline.

Program response: ADH has taken several actions to address this issue. ADH applied for and secured additional funds from the CDC to support cessation activities. While funding may not be used for pharmacotherapies, ADH will utilize these new funds to enhance current media efforts in rural areas and target marketing for Hispanic Arkansans. ADH plans to collaborate with the Office of Oral Health to target dental health professionals to stimulate Quitline referrals for spit tobacco users. ADH has directed their contracted media agency to more specifically mention the Quitline number. Other ADH programs, such as the school, community, and minority grantees are strongly encouraged to promote the available cessation resources. In FY 06, the Cessation Network contract will be with the College of Public Health (COPH). As required by ADH, its proposal includes a budget and protocol for the purchase and distribution of pharmacotherapies for cessation treatment clients. Finally, COPH will provide broad cessation coverage by working with all the Area Health Education Centers. COPH will specifically ensure that high-risk pregnant women have cessation services by working with the UAMS Angels Project.

Recommendation: The ADH should take the initiative to identify all the smoking cessation activities funded by the Tobacco Settlement funds, and work with the other funded programs for a collaboration to coordinate the programs to more effectively serve a large number of Arkansas smokers.

Program response: ADH has contacted the Arkansas Minority Health Commission (MHC) the Delta AHEC and informed these other tobacco settlement programs about the availability of statewide Quitline for the individuals they serve.

Recommendation: Continue the statewide tobacco awareness campaign without a decline in intensity, and increase its coordination with other anti-tobacco media campaigns being operated across the state

Program response: The media campaign is continuing at about the current level of intensity. This is still a decline from its initial levels. According to ADH, it must approve all media from grantees and contractors (e.g., community coalitions).

Recommendation: The ADH should examine its media campaigns to ensure that they are consistent with the overall message the ADH wants to convey, and to assess its effectiveness in reaching Arkansans and changing their attitudes about tobacco use.

Program response: While several attitudes toward tobacco may not have changed, the focus of the media campaign has not necessarily been designed to do that. The media campaign has focused on clean air and promoting cessation. In addition, the media agency has conducted focus groups consisting of White, African-American and Hispanic youth and adults were held in five Arkansas cities during June to test creative concepts for the 2004-05 year.

Recommendation: Provide more technical assistance to the Minority Initiative Sub-Recipient Grant Office on reporting, activities that are evidence-based, and evaluation.

Program response: The Grant Office has hired David Fetterman to be the new evaluator. Dr. Fetterman is the developer of Empowerment Evaluation, a type of evaluation that emphasizes building capacity of local communities to conduct planning and self-evaluation. This emphasis should assist the Minority grantees reporting, activities that are evidence-based, and evaluation.

Recommendation: All of the evaluation mechanisms the ADH is using should be finalized and adequate technical assistance provided to these mechanisms end-users.

Program response: The evaluation system used by the community coalitions is finalized and is now accessible for data entry through the internet. The minority grantees and the statewide coalitions have recently been required to participate in this system.

Recommendation: ADH should enhance its tobacco-related disease efforts.

Program response: This program component has the second highest funding criterion set by the CDC, yet it continues to receive the least amount of funds. Similar to what was stated in the previous evaluation report, the ADH has done some work in this area (i.e., prepare UAMS to become a smoke-free campus and participate in the Chronic Disease State Planning Process), but it could do more. For example, the Arkansas Cancer Plan and its Evaluation Snapshot released in October 2004 does not specifically link tobacco activities to other chronic health diseases. It mostly addresses tobacco separately and then restates goals and activities that are already being addressed by other ADH activities.

FIVE-YEAR AND SHORT-TERM GOALS

ADH has identified five long-term goals:

1. For the school programs, achieve at least a 75 percent compliance rate with the CDC guidelines for school programs on tobacco prevention and cessation.
2. Establish a state network of smoking cessation programs across the state with coverage such that people do not have to travel more than one hour to access a program (provided that funding is available).
3. Establish and maintain a mix of ads in the media campaign that emphasizes restricting smoking in public places (i.e., clean air) and smoking cessation in a 2:1 ratio.
4. By 2008, 25 percent of all Arkansans will live in communities that have legislated smoke-free environments that exceed levels of bans established by state legislation.
5. By 2008, 75 percent of Arkansas worksites will have a smoke-free workplace policy as assessed by the Census Bureau's Current Population Survey (CPS).

ADH plans to reach these longer-term goals by doing several things in the short term. First, they are restructuring the school grant program so that the grantees will be more accountable to their workplans. RAND and ADH staff plan to collaborate on developing a more detailed monitoring system to track school grant performance. Second, as stated above, ADH will be restructuring its Cessation Network, directing more media attention to cessation, and use its newly acquired CDC funds to engage underserved minorities. Third, ADH will be reorienting its media campaign to focus on clean air and cessation. Fourth, the ADH will continue to support its local and statewide coalitions' efforts to provide education and support for clean air ordinances.

PERFORMANCE ON PROCESS INDICATORS THROUGH 2004

Ten indicators were selected to represent the overall progress of the ADH Tobacco Prevention and Cessation program. These indicators are used to track progress on fulfilling the mandates in the Act for the program to develop and monitor the eight components of the Tobacco Prevention and Cessation Program delineated in the Act. The program components for which indicators were established are the community coalitions to reduce youth tobacco use, local school education programs, enforcement of youth tobacco control laws, tobacco cessation programs, tobacco-related prevention programs, and public promotion and health awareness campaign, and minorities program.

Community prevention programs that reduce youth tobacco use

Indicator: Number of community-level community changes initiated, especially newly enacted second hand smoke policies

The key indicator for this aspect of the tobacco control strategy is the number of permanent effects the ADH coalitions have had in their communities. In 2004, the coalitions efforts have led to 18 restaurants, seven workplaces, five medical facilities, a ballpark, a library, two large festivals, and all county-owned buildings in Johnson County to go smoke-free. Other changes caused by coalition efforts included the starting of new cessation activities and decreased tobacco advertising. As shown in Table 3.1, there was a sharp increase in community changes during the six-month period of July through December 2004.

Table 3.1 Community Changes for Tobacco Prevention

Six month Time Period	Number of Community Changes *
Jan-Jun 2002	na
Jul-Dec 2002	2
Jan-Jun 2003	15
Jul-Dec 2003	3
Jan-Jun 2004	13
Jul-Dec 2004	35

Source: Reports from participating educational cooperatives

* Community changes are new or modified programs, policies, or practices in the community facilitated by the initiative that reduce risk factors for tobacco use and subsequent tobacco-related illness and death (e.g., a "no smoking" policy).

The most significant community change, as a result of the work done during 2003 by the Northwest Arkansas Tobacco-Free coalition, was the passing of a smoking ban in public places by the city of Fayetteville, which went into effect on March 11, 2004.

Local school education and prevention programs in K-12 that includes school nurses when appropriate

Indicator: Percentage of CDC recommended approaches put in place in each participating educational co-operative.

Successful prevention education programs focus on helping youth to identify reasons not to use tobacco, to understand how tobacco use could affect them in their everyday lives and social relationships, to understand the benefits of not using, to believe that they can successfully resist pro-tobacco pressure, and to understand that most people do not use tobacco. Based on published evidence on school programs for tobacco prevention education, the CDC developed the following set of *best practice guidelines* specifically designed for schools (CDC, 1994):

1. Develop and enforce a school policy on tobacco use.
2. Provide instruction about the short- and long-term negative physiologic and social consequences of tobacco use, social influences on tobacco use, peer norms regarding tobacco use, and refusal skills.
3. Provide tobacco-use prevention education in kindergarten through 12th grade; this instruction should be especially intensive in junior high or middle school and should be reinforced in high school.
4. Provide program-specific training for teachers.
5. Involve parents or families in support of school-based programs to prevent tobacco use.
6. Support cessation efforts among students and all school staff who use tobacco.
7. Assess the tobacco-use prevention program at regular intervals.

To develop documentation on the extent to which the school programs funded by the ADH were adhering to the CDC guidelines, RAND and the ADH worked together to develop reporting forms and a monitoring system that tracks adherence in all educational co-ops across Arkansas. The public health nurses and school personnel completed these evaluation forms for January through December 2004.

Data on compliance with the CDC guidelines are shown in Table 3.2. In general, the level of compliance as reported by the cooperatives improved from the last report. The only exception was the degree to which cooperatives were providing training in the prevention curriculum, which declined somewhat. Some of the educational cooperatives did not report on their compliance with the CDC guidelines. For those that did report, the compliance percentages vary across the guidelines. Three cooperatives were in full compliance with all CDC guidelines (compared to only in the previous report), and two others were in compliance with all but one guideline.

All cooperatives have a school policy, although the degree of enforcement varied greatly. The most common mechanism to deliver the anti-smoking policy to students is the student handbook. Most cooperatives have either implemented or purchased evidence-based anti-tobacco curriculum, which address the necessary knowledge, attitudes, and skills needed to prevent

tobacco use as recommended by the CDC in at least some grades K-12. Cooperatives that received a "Partial" rating did so because their curriculum was not yet being implemented or was not being implemented in all grades as recommended by the CDC. In addition, most cooperatives have provided training to the teachers responsible for implementing the prevention curriculum and have involved community stakeholders and support cessation. The weakest areas across the all the guidelines and cooperatives are the school policies and the implementation of evidence-based tobacco prevention curriculum.

Table 3.2 Implementation of the CDC-Recommended Approaches for Tobacco Prevention Education by ADH Educational Cooperatives, December 2004

	Recommended CDC Approaches Implemented by Programs						
Educational Co-ops	1	2	3	4	5	6	7
AR River Ed	Full	Full	Full	Full	Full	Full	Full
Arch Ford	Partial	Full	Full	?	Full	Full	Full
Crowley's Ridege	Full	Full	Full	Partial	Full	Full	Full
Dawson	Full	Full	Full	Full	Full	Full	Full
DeQueen-Mena	Partial	Partial	Partial	Partial	Full	Partial	Full
Great Rivers	Partial	Full	Full	None	Full	Full	Full
NAESC	Full	Full	Partial	Full	Partial	Partial	Full
Northeast AR	Full	Full	Partial	Full	Partial	None	Full
NW AR	Partial	Full	Partial	Full	Full	Partial	Full
OUR Harrison	Partial	Full	Partial	Full	Full	Partial	Full
South Central	Full	Full	Full	Full	Full	Full	Full
Southeast AR	Full	Full	Partial	Partial	Partial	Full	Full
SW AR	Partial	Full	Full	Full	Full	Full	Full
Western AR Ed	?	?	?	?	?	?	Full
Wilbur Mills	Partial	Full	?	?	?	Partial	Full
Number of co-ops with missing information	1	1	2	3	2	1	0
Percentage of co-ops in full compliance with guidelines*	50%	93%	54%	67%	77%	64%	100%
Compliance from previous report	43%	91%	33%	82%	67%	46%	100%

? Indicates there was insufficient information to assess implementation status.
*Of those co-ops that have reported information

Enforcement of youth tobacco control laws

Indicator: Number of stores checked by the Tobacco Control Board for compliance with rules to not sell tobacco products to minors

The enforcement arm of the ADH tobacco prevention and cessation strategy is the ATCB checks of stores regarding sales of tobacco products to youth. Enforcement of under-18 laws to restrict purchase of tobacco products by youth is an important part of a comprehensive strategy to reduce young people's use of tobacco. To be most effective, however, minors' access restrictions need to be combined with merchant education and a comprehensive tobacco control program that reduces the availability of social sources and limits the appeal of tobacco products.

The number of checks performed by the ATCB are reported in Table 3.3. The ATCB remained generally consistent in the number of store checks it performed in 2004. The average violation rates for 2004 continue to drop and are below 20 percent, which is the benchmark used by Synar. Because the goal of these checks is to target stores suspected to be in violation, we would expect to see higher violation rates than those obtained in the Synar data. Synar found a violation rate in 2003 of 16.6 percent, which declined to 4.2 percent in 2004.[2] Therefore, the ratio of ATCB rates to Synar rates increased from 2003 to 2004, which probably indicates better targeting of non-compliant merchants in the ATCB checks. Furthermore, the dramatic drop in Synar rates is consistent with the premise that the large number of inspections that has been performed over the past couple of years is having an impact on merchant behavior.

Table 3.3 Compliance Checks of Stores by the Arkansas Tobacco Control Board

Six-month Time Period	Number of checks by the ATCB	Percentage Found in Violation
Jul-Dec 2002	1,138	24.1%
Jan-Jun 2003	945	17.8
Jul-Dec 2003	4,147	16.5
Jan-Jun 2004	3,878	11.8
Jul-Dec 2004	3,661	10.7

As stated in the previous report, the violation rates for vending machines in 2003 was high (about 50 percent) in comparison to stores. The 70 checks of these machines made in 2004 yielded violation rates of about 31 percent.

Tobacco cessation programs

Indicator: Number of smokers enrolled in the Mayo Clinic Tobacco Cessation Service program

Indicator: Number of smokers enrolled in the AR Foundation for Medical Care (AFMC) program

The CDC Best Practice Guidelines (1999) stress cessation as a critical component of their recommended tobacco control strategy. While preventive interventions are most important to keep youth from ever using tobacco products, cessation services are needed to address the health needs of current tobacco users. These types of services greatly reduce the risk of premature death due to tobacco use (US DHHS, 1990).

Table 3.4 shows the 3 and 6 month quit rate by each semi-annual period for both the Mayo and AFMC programs. According to Table 3.4, the Mayo Quitline has been yielding good cessation results, higher than what has been previously been reported in the literature for proactive quitlines. Even for those who have not quit using tobacco, Mayo has also been able to document that a significant portion of this group are using tobacco less (39 percent at three months and 35 percent at six months for all of 2004).

[2] The Synar data were collected in the summer 2003 and 2004 and published in reports dated the following years.

The AFMC program has also yielded high quit rates. The overall 19 to 21 percent quit rate is excellent given the typically low quit rates for even the best smoking cessation programs. For example, results from several studies (Fiore et al., 2000) show that quit rates for nicotine replacement and other drug therapies alone range between 18 to 36 percent and that behavioral interventions range from about 11 to 27 percent. It has also been established that higher quit rates are often achieved when individuals receive more treatment sessions for more minutes or when multiple formats are used at once (e.g., nicotine replacement with a behavioral intervention).

Table 3.4 Enrollments and Quit Rates for ADH Tobacco Cessation Programs

Time Period	Mayo Clinic Quitline			AFMC Program	
	Enrolled	Three months quit rate*	Six months quit rate*	Enrolled	Total quit after three months*
Jan-Jun 2003	1,402	19.8%	None eligible**	785	None eligible**
Jul-Dec 2003	421	18.1%	20.3%	878	20.0%
Jan-Jun 2004	329	30.0%	22.6%	761	18.7%
Jul-Dec 2004	581	27.0%	17.1%	696	21.8%

Source: Quarterly reports from the Mayo Clinic program and from the AFMC program

* This rate reflects only those confirmed to have quit of those enrolled, the most conservative depiction.

** Participants were not eligible for their follow-up assessment at the time

Several factors should be noted when interpreting these quit rates. First, at the time of measurement, not all those enrolled during each particular time period were eligible yet for their three- and six-month follow-up assessments, so the denominators are only those for whom three- and six-months has passed since discharge. Second, the programs were not able to contact about 20 to 33 percent of discharged participants to assess their quit status. In particular, the AFMC program serves individuals who are low- income, low educational level, and highly transient. Finally, it can be difficult to compare quit rates achieved by the university-based cessation studies mentioned above to treatment in community settings because the later programs almost always have fewer resources.

For Table 3.4, enrollees who could not be contacted were considered to not have quit, and rates were calculated by dividing the number contacted who reported they quit by the total number enrolled. Thus, the actual quit rates may be higher than what ADH has been able to document. For example, the Mayo Clinic program quit rates for the subset of enrollees who were successfully contacted were about 50 percent at three months and 48 percent at six months for all of 2004.

Tobacco-related disease prevention programs

Indicator: Number of miles of hiking trails constructed in the Trails for Life program

Tobacco use increases the risk for a number of diseases that need to be treated and prevented even in the face of lessening tobacco use. Therefore, the CDC recommends addressing tobacco use in the larger context of these diseases, attempting to link tobacco control activities to those taken to prevent tobacco-related diseases such as cancer, cardio-vascular

disease, asthma, oral cancers, and stroke (CDC, 1999). The Trails for Life Grant Program, which provides funding to construct walking trails, can be a part of this comprehensive strategy.

On August 11, 2004, it was announced that 18 sites received funding to build a trail. Grantees were then required to draw up plans and hire an engineer consultant to assist with the plan. The plans must be approved by the Arkansas Department of Parks and Tourism before funds can be released and construction can begin. To date, all plans have been approved and construction will begin soon. All grantees are required to document the use of the trails within a year of completion.

A comprehensive public awareness and health promotion campaign

Indicator: Number of public service announcements and community events to support tobacco prevention and cessation activities

Indicator: Percentage of media ad funds leveraged as donated funds from the media companies

Indicator: Percentage of youth surveyed who recall the SOS media campaign

Media campaigns have been documented to reduce smoking among current smokers and to prevent initiation among non-smokers (Hamilton, 1972; Farrelly et al., 2002; Siegel and Biener, 2000). Such campaigns are even more effective when implemented along with other elements of an effective tobacco control strategy, such the other components of the ADH Tobacco Prevention and Cessation Program. Guidance from the U.S. Department of Health and Human Services states that media campaigns need to have sufficient reach, frequency, and duration to be effective; that all media should be pre-tested with the target audience, and that effects of the media campaign should be continuously monitored (US DHHS, 2000).

Since its start, the SOS campaign run by the ADH has maintained a steady presence in local communities and has placed hundreds of paid advertisements across the state. As shown in Table 3.5, the community events increased slowly over time, peaking in the first half of 2004 and then declining. The PSAs and media spots built momentum more quickly, peeking in the second half of 2002. They declined substantially in the second half of 2004.

Table 3.5 Media and Community Events for Tobacco Prevention and Cessation

Six-Month Time Period	Community Events	PSAs/Media Coverage
Jan-Jun 2002	0	5
Jul-Dec 2002	8	630
Jan-Jun 2003	27	295
Jul-Dec 2003	30	114
Jan-Jun 2004	86	274
Jul-Dec 2004	23	58

The SOS contractor has been successful in leveraging additional funding that has enabled it to provide additional media beyond what the ADH contract covered, as shown in Table 3.6. This includes free print and TV advertisements and public relations coverage of ADH activities, sponsorships, and other partnerships that significantly enhanced the actual campaign budget.

Table 3.6 Media Advertisement Costs Paid by the ADH and from Donated Funds

	Six-month Time Period				
	Jul-Dec 2002	Jan-Jun 2003	Jul-Dec 2003	Jan-Jun 2004	Jul-Dec 2004
Campaign paid by ADH	$448,723	$371,434	$1,021,054	$1,378,946	$ 615,880
Donated	875,877	1,000,619	1,827,316	884,574	1,361,173
Leverage ratio (donated/paid)*	1.95	2.69	1.79	0.64	2.21

Source: Cranford, Johnson, Robinson Woods reports

* This leveraged amount is actually an underestimate because much of the spending is "front-loaded" and should increase as the campaign progresses.

The SOS contractor hired a local survey research firm—Opinion Research Associates—to assess its media penetration over time using three representative statewide samples (about 400 teens, 400 African-American teens, and 400 adults obtained through random digit sampling). As shown in Table 3.7, recall of the SOS campaign was 73 percent for both all teens and African-American teens in November 2002. Recall increased to 87 percent of all teens and 89 percent for African-American teens in August, 2003, and increased again to 91-92 percent in September, 2004. However, the recall rates for each of the individual elements of the campaign were much lower (not shown in the table). Recall also increased among adults, from 44 percent in 2002, 63 percent in 2003, and 75 percent in 2004.

Table 3.7 Percentage of Survey Respondents Who Reported They Recalled the SOS Media Campaign

	October-November 2002		August 03		September 04	
Group Surveyed	Number surveyed	Percentage Recall	Number surveyed	Percentage Recall	Number surveyed	Percentage Recall
General Teens	401	72.8%	400	87.0%	402	92.0%
African American Teens	400	73.0	404	89.1	405	91.0
Adults	400	44.0	400	63.0	404	75.0

Questions about attitudes toward smoking also were included in the adult survey. An additional sample of 602 adults were asked these attitudinal questions to serve as a baseline prior to the start of the media campaign. In general, the attitudes assessed among adults remained stable across the four time periods (February 2002, October 2002, August 2003, September 2004). Specifically, there was little change in adults' attitudes that tobacco was a serious problem, trying to quit, recent exposure to second hand smoke at home, workplaces having a no-smoking policy, allowing smoking in the car, public places, bars, and indoor restaurants, and not allowing the tobacco industry to sponsor community events. There also was no change in the extent to which respondents avoided public places or restaurants that allowed smoking. There was a slight improvement in the attitudes that it was a serious problem that youth have access to tobacco and that smoking should not be allowed at home. It should be noted however, that none of the trends of Opinion Research Associates data were submitted to statistical tests, so they should be viewed cautiously.

Minority initiatives

Indicator: Percentage of graduates from UAPB Addiction Studies who obtain an addiction job within AR after graduation

Cigarette smoking is a major cause of disease and death for minorities, especially for African Americans (US DHHS, 1998; Chatila et al., 2004). Smoking prevalence increased in the 1990s among African American and Hispanic youth. This reverses a trend of large declines during the 1970s and 1980s, especially among African American youths, which may be due to targeting of tobacco industry marketing efforts toward minority populations (USDHHS, 1994; 1998; 2001; Geobel, 1994; Ling and Glantz, 2002; Yerger and Malone, 2002; Robinson et al., 1992; Robinson, Pertschuk, Sutton, 1992). At the same time, minority populations traditionally have less access to prevention and treatment services, and there is clear evidence that the disproportionate tobacco-related disease burden experienced by minority communities requires specific attention.

In the Spring 2004, the program graduated 15 students. In December, the program graduated an additional 6 students for a total of 21 graduates. Out of this group, 16 (76 percent) have obtained addiction jobs in Arkansas.

ANALYSIS OF SPENDING TRENDS

Act 1572 of 2001 and H.B. 1021 of 2003 appropriated funds for ADH Tobacco and Cessation Programs for the first two biennium periods of the Tobacco Settlement Fund Allocation. Table 3.8 details the appropriations and actual funds received, by fiscal year. Numbers in parentheses indicate the actual amount received for a particular category. After the first biennium, ADH returned $6,591,842 to the master Tobacco Settlement Fund. During FY2004, ADH learned that their total allocation would decrease to $14,694,000. ADH then requested the carryover amount from the first biennium. Near the end of FY2004, they received $6,360,422. Including these carryover funds, ADH received a total of $21,054,422 for FY 2004.

The following analysis describes the Tobacco Settlement expenditures by the ADH from July 2001 through December 2004. Because December 2004 is the middle of the second year of the second biennium, no year totals for FY2005 are presented, and it is not yet possible to fully detail expenditures in the second biennium.

Table 3.9 presents the total annual Tobacco Settlement funds spent by the ADH during this time period, using the funds categories listed in Table 3.8. As in prior years, ADH spent less than the total amount received for FY2004. Creating a spending budget for each fiscal year is more challenging for the ADH than for the other programs receiving Tobacco Settlement funding, because ADH is the only program required to borrow ahead by estimating how much it thinks it will receive, to spend its borrowed amount, and then get paid back by the funds. It is further complicated by the fact that appropriations represent upper limits of approved spending.

Figure 3.1 highlights the ADH spending by quarter for three categories: (1) regular salaries, personal service matching, and extra help, (2) maintenance and operations, and (3) tobacco prevention and cessation programs. Spending for all of these categories reached a plateau at the end of FY2003 as the tobacco prevention and cessation programs became fully operational. Starting in FY2004, spending ranged between 3 and 5 million dollars per quarter.

A considerable amount of Tobacco Settlement funds originally designated for ADH "tobacco cessation and prevention" were allocated, primarily by legislative action, to programs that were not directly focused on tobacco cessation and prevention, including the breast cancer control fund, the Trails for Life program, the nutrition and physical fitness program, and an Addiction Studies program at the University of Arkansas at Pine Bluff. Figure 3.2 highlights the percentage of tobacco and cessation funds spent on non–tobacco cessation and prevention activities. That percentage has remained fairly consistent each fiscal year.

Table 3.8
Tobacco Settlement Funds Appropriated (and Received) for the ADH Tobacco Prevention and Cessation Program, by Fiscal Year

	First Biennium		Second Biennium	
Item	2002	2003	2004	2005
(1) Regular salaries	$ 593,433	$ 634,332	$1,362,742	$1,399,537
(2) Extra help	10,000	50,000	50,000	50,000
(3) Personal service matching	158,995	168,662	370,280	377,129
(4) Maintenance & operations				
(A) Operations	217,236	217,236	206,536	206,536
(B) Travel	30,000	40,000	40,030	40,030
(C) Professional fees	1,080,000 (871,913)	1,700,000	1,700,000	1,700,000
(D) Capital outlay	41,500	41,500	0	0
(E) Data processing	0	0	0	0
(5) Prevention and cessation programs	7,374,365 (3,543,767)**	24,263,722 (13,281,654)	13,868,073 (13,516,335)	13,855,204
(6) Personal services and operating expenses				
(A) Public health nurses*	1,000,000	1,000,000	0	0
(B) Nutrition & Physical Activity Program	0	0	881,000 (800,000)	893,869
(7) Transfer to breast cancer control fund	500,000	500,000	500,000	500,000
Funds carryover			2,508,499	
Annual Total	$11,005,529 (6,966,844)	$28,615,452 (17,633,384)	$18,978,661 (21,054,422)	$19,022,305
Biennium Total	$39,620,981 (24,600,228)		$38,000,966	

* Act 61 of 2003 (H.B. 1021) moved salary expenses for public health nurses into regular salaries starting in FY2004

** Numbers in parentheses indicate the actual amount received for a particular category.

The CDC has created guidelines for the amount of money each state should dedicate to various aspects of tobacco prevention and cessation (www.cdc.gov/tobacco). Table 3.10 highlights the recommended program components suggested by the CDC and compares the spending on these components in Arkansas in fiscal years 2002–2005 with the lower end of the

funding criteria the CDC specifically designed for the State of Arkansas. In FY2004, ADH's total spending fell below the lower end of the CDC recommended total amount. While ADH spent more than the recommended amount in two of the program areas, Community Programs and Statewide Programs, the CDC spending guidelines are lower end limits or the minimum amount that should be spent.

Table 3.9
Tobacco Settlement Funds Spent by ADH, by Fiscal Year

Line Item	2002	2003	2004	2005*
(1) Regular salaries	$ 395,199	$ 496,642	$1,246,702	$689,325
(2) Extra help	9,988	29,468	25,840	5,540
(3) Personal service matching	100,225	129,852	347,474	186,225
(4) Maintenance & operations				
(A) Operations	141,967	256,258	342,896	110,623
(B) Travel	29,820	21,243	38,105	4,205
(C) Professional fees	122,473	1,141,081	861,115	441,367
(D) Capital outlay	13,044	11,161	0	0
(E) Data processing	0	0	0	0
(5) Prevention and cessation programs**	1,077,892	11,937,223	13,123,594	5,796,351
(6) Personal services & operating expenses				
(A) Public health nurses	121,547	973,303	0	0
(B) Nutrition & Physical Activity Program	0	0	543,732	216,206
(7) Transfer to breast cancer control fund	500,000	500,000	500,000	500,000
Annual Total	$2,512,155	$15,496,231	$17,029,459	$7,949,843

* Amounts spent by December 31, 2004.
** Includes amounts spent on minority initiatives

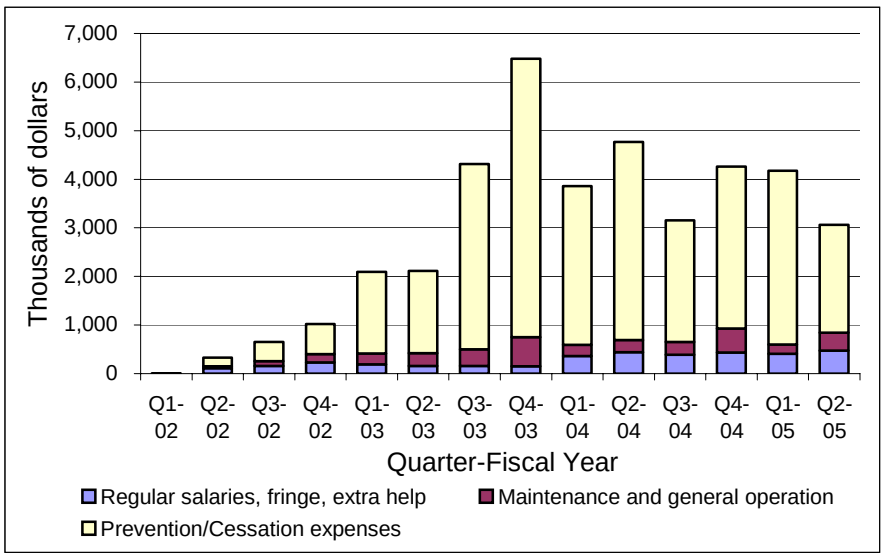


Figure 3.1 ADH Tobacco Settlement Fund Spending, by Quarter of Fiscal Years

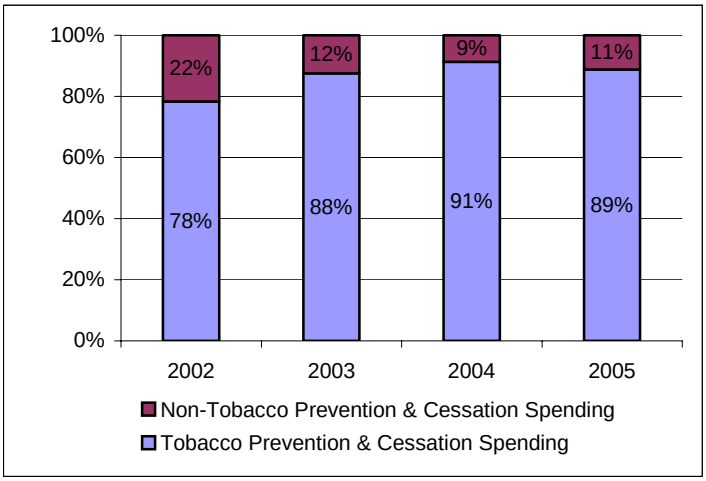


Figure 3.2 Percentage of Tobacco Cessation and Prevention Funds Spent on Non–Prevention and Cessation Activities, by Fiscal Year

Table 3.10
Tobacco Settlement Funds Spent on Tobacco Prevention Programs Compared with CDC Guidelines*

Recommended Program Component	2002	2003	2004	2005**	Lower End of CDC Funding Criteria***
Community Programs to Reduce Tobacco Use	$334,572	$3,209,286	$5,465,195	$2,574,639	$2,892,133
Chronic Disease Programs	70,941	862,263	275,728	24,551	3,117,667
School Programs	121,547	2,500,355	2,373,678	1,189,621	2,701,978
Enforcement	318,123	600,852	740,867	452,217	1,366,468
Statewide Programs	112,019	1,070,338	1,213,322	431,074	1,116,611
Counter-Marketing	344,447	1,943,721	1,943,326	955,001	2,789,317
Cessation Programs	169,353	2,137,104	2,455,559	1,108,679	3,229,328
Surveillance and Evaluation****	150,033	709,418	549,184	123,497	1,721,350
Administration and Management	345,581	529,019	537,023	202,138	861,228
Total spent on tobacco-related programs	1,966,616	13,562,356	15,553,881	7,061,417	19,796,080
Totals spent on non-tobacco areas	545,540	1,933,875	1,475,578	888,425	

* CDC-recommended program element budgets for tobacco prevention activities, from www.cdc.gov/tobacco

** Total monies spent by December 31 2004.

*** These CDC estimates have been converted from 1999 to 2004 dollars.

**** ADH builds evaluation into all of its contracts and grants. Because there is no way to quantify that built-in amount, the values in this row are underestimates of the amount that ADH actually spends on evaluation.

PROGRAM-SPECIFIC RECOMMENDATIONS

As a whole, the ADH program continues to be extremely active in its comprehensive prevention and cessation efforts. The community coalitions and educational Co-ops funded by ADH are effecting changes in communities and tobacco prevention programs and policies. The ATCB continues to make thousands of compliance checks of tobacco outlets all across the state with apparent effects on reducing violation rates. ADH continues to fund two statewide coalitions--Coalition for Tobacco Free Arkansas (CTFA) and Arkansans for Drug Free Youth (ADFY), which are promoting smoke-free lifestyles for youth and clean air laws to reinforce these behaviors. The two cessation programs, the Mayo Quitline and the AFMC-run Cessation Network have produced quit rates among their clients at or above the norm for such programs. The Arkansas Cancer Coalition used ADH funds to support the UAMS' move to a smoke-free campus, but this component of ADH's program continues to be the most under funded and more could be done to link tobacco to other tobacco-related diseases.

The media campaign has received less funding than when it first started, but it has continued to effectively promote smoke free environments through various media channels. The SOS campaign continues to show improvements in recall among Arkansans and attract a large amount of free media contributions. The ADH Minority initiative has made considerable progress in its grant operations and the grantees are receiving more assistance with their own planning and evaluation activities. Finally, the ADH has been engaging in several evaluation activities and planning new ones, including several important statewide surveys. In the future, ADH will be increasing the requirements for evaluation across many of grantees and contractors.

Below are our recommendations for ADH. Some recommendations are carried over from the last report and some are new in this report.

Recommendations

- **ADH should further strengthen its evaluation requirements for all its grantees and contractors such as the community coalitions, school grantees, minority grantees, media campaign, and the statewide coalitions. (continuation of a recommendation in the previous evaluation report)**

This recommendation also includes tracking not only what applicants state they will do in their work plans, but also the actual outcomes or impacts of those activities on the behaviors of youth and adults. As one example, the community coalition grantees are currently required to conduct evaluations, but are not required to submit them to ADH. In the next round of community coalition funding, they will be required to submit all their evaluations to ADH. In another example, the Minority Initiative Sub-Recipient Grant Office (MISRGO) has received evaluations for almost all of their grantees. Many provide excellent documentation of whether or not the grantee completed the activities stated in the work plans submitted with their applications for funding. However, none tracked the actual impact of those activities. Therefore, grantee and contractor evaluations need to track ultimate impacts, such as changes in actual tobacco use and attitudes or ordinances passed. In addition to these examples, this recommendation also applies to the media campaign, school grantees, and statewide coalitions.

- **Grantees and contractors should receive detailed feedback based on submitted evaluation data. (new recommendation)**

The ADH currently is implementing a feedback mechanism with the community coalitions called the Building/Expanding Infrastructure Program Assessment Report. Through this mechanism, ADH assesses several important domains and provides feedback to the coalitions based on the findings. Similar reports should be instituted with all the grantees and contractors, tailored to the specific grant program or contract.

- **Funding levels for the nine components of a comprehensive statewide tobacco control strategy should be raised to the minimums recommended by the CDC for Arkansas. (continuation of a recommendation in the previous evaluation report)**

We continue to recommend that the CDC spending guideline for Arkansas be met in spending on funding for the ADH and other statewide tobacco control activities. Currently, most ADH program components are below the CDC guidelines. Given that sufficient funds are not being appropriated to support the necessary programming, supportive legislation for smokefree environments are not being passed by the General Assembly, and other efforts to further erode the ADH funding continue, the ADH program cannot be expected to have the impacts on tobacco use that would be possible with adequate funding and reinforcing regulatory support. .

- **Funded programs that are not within the scope of tobacco prevention and cessation programming, as defined by the CDC guidelines, should be re-evaluated for their value in contributing to reduction of smoking and tobacco-related disease. (continuation of a recommendation in the previous evaluation report)**

Similar to the previous report, it is recommended that programs that are not likely to have an impact on tobacco use (Breastcare, Trails for Life, UAPB Addiction Studies program, Act 1220, and the non-tobacco related components of Healthy Arkansas) be supported with other funds. While these programs are potentially valuable, using tobacco funds to support them weakens the anti-tobacco effort.

- **The process ADH must use to budget its funds should be changed to be in line with the other Tobacco Settlement programs. (new recommendation)**

Because the legislature funded an Arkansas Rainy Day Fund by shifting the first year of funds out of the Tobacco Prevention and Cessation Program Account, budgeting is more complicated for ADH than for the other programs receiving Tobacco Settlement funding.[3] As a result of this shift in funds, the ADH was placed in the position of borrowing funds to support its tobacco prevention and cessation activities, which then are repaid in the next cycle of Tobacco Settlement funding. Therefore, ADH has held about two million in reserve to guard against not having enough funds to meet all of its financial demands. While this money can be rolled over, this situation delays ADH's ability to use funding, which contributes to weakening its impacts on smoking behaviors.

[3] The purpose of the Rainy Day Fund was to make funds available to assist the state Medicaid program in maintaining its established levels of service in the event that the current revenue forecast is not collected.

Chapter 4
College of Public Health

UPDATE ON PROGRAM ACTIVITIES

During the past fiscal year, the COPH has continued to hire faculty and has also continued their faculty recruiting efforts. Student enrollment is holding steady, and a director of Student Services has been hired. In addition, the COPH had a similar number of applicants this year compared with previous years although they are no longer able to provide a tuition discount for ADH employees. The COPH has continued to expand their research program. In the second half of 2004 all of the 14 proposals submitted by COPH faculty were funded. The COPH also received another $1.1 million from the Robert Wood Johnson Foundation to continue their evaluation of the obesity childhood initiative.

The COPH relationship with the Health Department is growing stronger over time. The new COPH Chair of Health Policy and Management, Paul Halverson, currently works across both the Health Department and COPH due to his experience with the Center for Disease Control and his work on bioterrorism.

The COPH has acknowledged that they have several challenges ahead. The main challenge relates to potential changes in accreditation criteria, which will mean needing to increase faculty in each department and having 3 separate doctoral programs. In terms of funding, the COPH is receiving 29 percent less than the Tobacco Settlement funds appropriated for it. This resource constraint will make it difficult to meet the new accreditation criteria.

RESPONSES TO EVALUATION RECOMMENDATIONS IN THE 2004 REPORT

Recommendation: The COPH should continue to hire more faculty, particularly diverse faculty

Program response: The total COPH faculty is 33.15 FTEs as of December 31, 2004. Of these, 18 percent (6) are minority. There are four FTE African American female faculty, one FTE African American male faculty, and one FTE Hispanic male faculty. The recruitment and retention of a diverse faculty has always been and will continue to be a COPH priority.

Recommendation: The COPH needs to provide evaluation expertise to their community partners to assess the impact of the work they are doing in the community

Program response: The Office of Community-Based Public Health (OCBPH) is involved in several activities to address this need. The OCBPH has four formally recognized community partners: (1) Boys, Girls, Adults Community Development Center, (2) Walnut Street Works, (3) We Care, and (4) LA CASA. The Director and staff of the OCBPH are assisting Walnut Street Works in evaluating their Community Connector Program. In addition, Holly Felix within the OCBPH is assisting We Care in their evaluation activities on their tobacco prevention grant program. The OCBPH has also been asked to assist the USDA Delta Nutrition Intervention Research Initiative (NIRI) in providing training to their Arkansas community partners in Community-Based Participatory Research. The Marvel Boys, Girls, Adults Community Development Center (BGACDC), which plays a vital role in the Arkansas NIRI project, will benefit directly from this project, and lessons learned will also subsequently be shared with the other three formally recognized COPH community partners.

Recommendation: The COPH should maintain the discount for ADH employees

Program response: The COPH advised RAND and the Tobacco Settlement Commission, (and they agreed) that the COPH has no direct control over this recommendation. This decision must be agreed on by the UA Board of Trustees, the President of the UA System, and the Chancellor of UAMS. The COPH was not able to continue the discount this year. Despite this, applications to the program have remained steady.

Recommendation: The COPH should provide scholarships and discounts for distance learning students

Program response: The Tobacco Settlement Commission agreed that the COPH would not be evaluated on this recommendation, since it necessitated legislation that would provide funding for scholarships. Nonetheless, CEPH accreditation has made the COPH eligible for federal funds that the COPH is pursuing to assist students. The Student Services Coordinator provides ongoing information to COPH students about available scholarship funds. One COPH student received a $500 scholarship to attend a conference in California. In addition, the COPH is assisting two students applying for a Center for Child Injury Prevention Science (CChips) fellowship with their application. Faculty also provide scholarship information for posting on the display board and scholarship information is posted via email/snail mail ASAP. To date, the COPH does not have funds in their appropriation to provide scholarships.

Recommendation: The COPH should provide assistantships to students to help support the cost of obtaining a degree

Program response: Assistantships would require an appropriation for which the COPH has no direct control. However, several COPH students are being supported as research assistants from federal sources of funding. The COPH anticipates that other students will receive research support as additional funding is secured. It should also be noted that 90 percent of the COPH students are non-traditional, working full-time jobs and attending classes in the evenings or on weekends.

FIVE-YEAR AND SHORT-TERM GOALS

The COPH has established four long-term goals:

1. Establish doctoral programs in three areas by 2007-08.
2. Establish staffing of a minimum of five faculty for each of the three doctoral programs
3. Increase distance-accessible education.
4. Increase outside grant funding for research by 20 percent above 2004-05.

The COPH plans to reach these longer-term goals by taking several short-term actions. First, in order to have students advancing to candidacy, passing qualifying exams by 2010, they need to have these new students enter the two new doctoral programs by 2007. This will require gaining approval to establish the programs by both the UAMS Graduate School and the Arkansas Department of Higher Education in sufficient time to recruit and enroll students by the Fall of 2007. To meet this deadline, the faculty must develop plans for the programs as well as prepare a proposal and application to submit for these approvals. Second, COPH does not currently have enough funds to meet the current faculty FTE accreditation criteria, so it will continue to work

on leveraging funds and also plan to continue to partner with the Arkansas Department of Health and other UAMS Colleges so that they can hire more faculty.

In terms of distance education, COPH faculty believe that a totally distance-based education program is not appropriate for some course content (e.g., biostatistics courses in which many students find that they need the direct attention of an instructor to master the content) and may not allow students to learn to work in teams, a critical element involved in public health practice. The goal of the College's approach to making the MPH available to students residing some distance from Little Rock is to use a combination of distance education methods and alternative scheduling formats (such as weekend and "executive-program" formats) in what has been termed a "distance-accessible" program. To support faculty in using distance learning technologies, a Distance Learning Coordinator for the COPH has been appointed. His duties consist primarily of assisting faculty with making their courses available for student access on the Internet or by other distance learning technologies. Thus far, he has assisted on three courses, serves on the UAMS Teaching and Technology Committee, and has made three of the courses that he teaches either fully or partially accessible on the Internet. He is also developing two continuing education courses for the Internet. Faculty have been developing web-based courses and have also used streaming video and compressed video as some courses would work well utilizing these formats.

Finally, as noted above, work continues on leveraging funding, and 47 proposals have been written from January through December 2004.

PERFORMANCE ON PROCESS INDICATORS THROUGH 2004

As discussed in previous reports, four indicators were chosen to represent the overall progress in implementing the COPH program. These indicators track progress on fulfilling the mandates in the Act for the program to (1) increase the number of communities in which citizens receive public health training, (2) obtain federal and philanthropic funding, (3) conduct research, and (4) serve as a resource to the General Assembly, the Governor, State agencies, Communities.

Increase the number of communities in which citizens receive public health training.

Indicator: Percentage of all enrolled students who originate from each of the AHEC regions

The COPH has continued to attract students for public health training from a broad geographic range of communities and counties across the state. Despite the fact that they had to end their 70 percent discount this year to ADH employees, the COPH received the same number of applications as they had in the previous year. School enrollment has also remained steady and they hired a new Director of Student Services this year who has developed an aggressive student recruitment plan. They noted that the mean age of students has decreased slightly in 2004. Table 4.1 and Figure 4.1 show the distribution of students by region of origin (birthplace). As can be seen from the table and figure, students attend the program from many different regions. Of note, because these percentages are based on students birthplace, there appears to be a large proportion of "foreign" and "out of state" students; however, all students seeking degrees in the program are current residents of Arkansas.

Table 4.1 Distribution of Students by Region of Origin

Region	Spring '02	Summer '02	Fall '02-03	Spring '03	Summer '03	Fall '03-04	Spring '04	Fall '04-05
Number enrolled	43	15	93	119	86	177	190	181
Central	49.0%	58.8%	28.0%	32.7%	23.3%	28.0%	28.0%	28.0%
South Central	13.7	11.8	12.9	14.3	25.6	16.0	17.0	14.0
North Central	2.4	0.0	3.2	5.0	5.8	7.0	7.0	9.0
Northeast	9.4	11.8	8.6	3.4	5.8	7.0	7.0	7.0
Northwest	4.6	0.0	4.3	3.4	5.8	5.0	5.0	4.0
Southwest	0.0	0.0	4.3	7.6	3.5	3.0	4.0	3.0
South	2.4	0.0	3.2	3.4	5.8	5.0	4.0	4.0
Delta	2.4	0.0	4.3	4.2	1.2	3.0	3.0	3.0
Out of State	13.7	17.6	20.4	19.3	17.4	18.0	16.0	19.0
Foreign	2.4	0.0	10.8	6.7	5.8	8.0	9.0	9.0

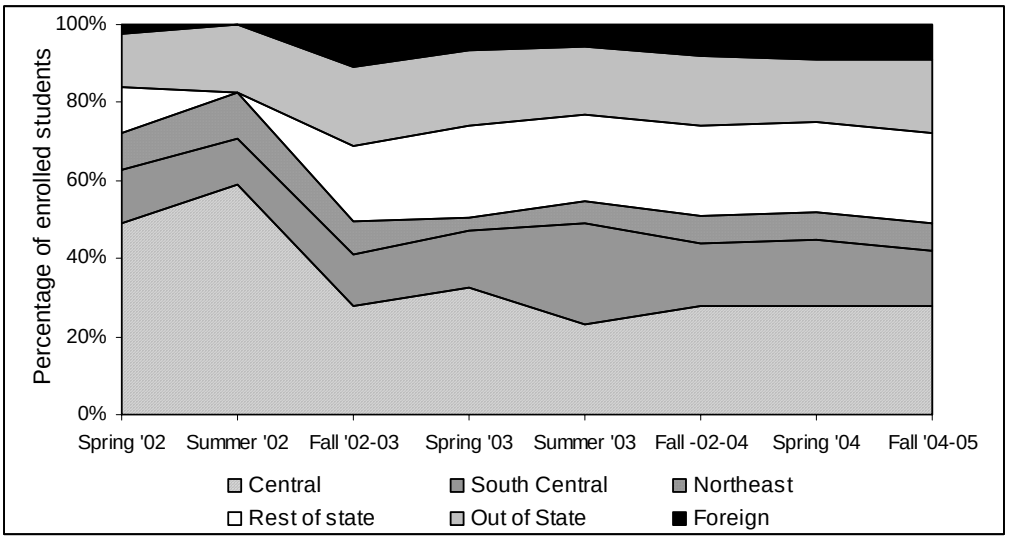


Figure 4.1 Trends in Enrollment Distributions by Region

Indicator Percentage of graduates pursuing employment in a public health-related field.

The first student graduated in December 2003. Since that time, COPH has had a total of 11 graduates – seven MPH and four Certificates. Currently 10 out of 11 of these graduates (91 percent) are employed in a public health related filed. One graduate moved to Canada and her information is not available.

Indicator: Percentage of all enrolled students who are African-American, Latino, or Asian-American

Table 4.2 and Figure 4.2 show the percentage of COPH students enrolled by race/ethnicity and compares the percentages to the state of Arkansas. This information indicates that the COPH continues to be quite successful in recruiting a diverse population of students, although Latinos have been somewhat under-represented in the student body.

Table 4.2 Percentage Distribution of COPH Students by Race/Ethnicity

School Quarter	Percentage by Racial/ethnic Group				
	White	Black	Asian, other	Latino	Native American
Arkansas Population	78	16	3	4	0
Spring 2002	50	41	7	2	0
Summer 2002	47	47	6	0	0
Fall 2002-03	59	34	5	2	0
Spring 2003	57	36	5	2	0
Summer 2003	52	41	6	1	0
Fall 2003-04	60	32	7	1	1
Spring 2004	60	31	7	1	1
Fall 2004-05	64	27	7	1	1

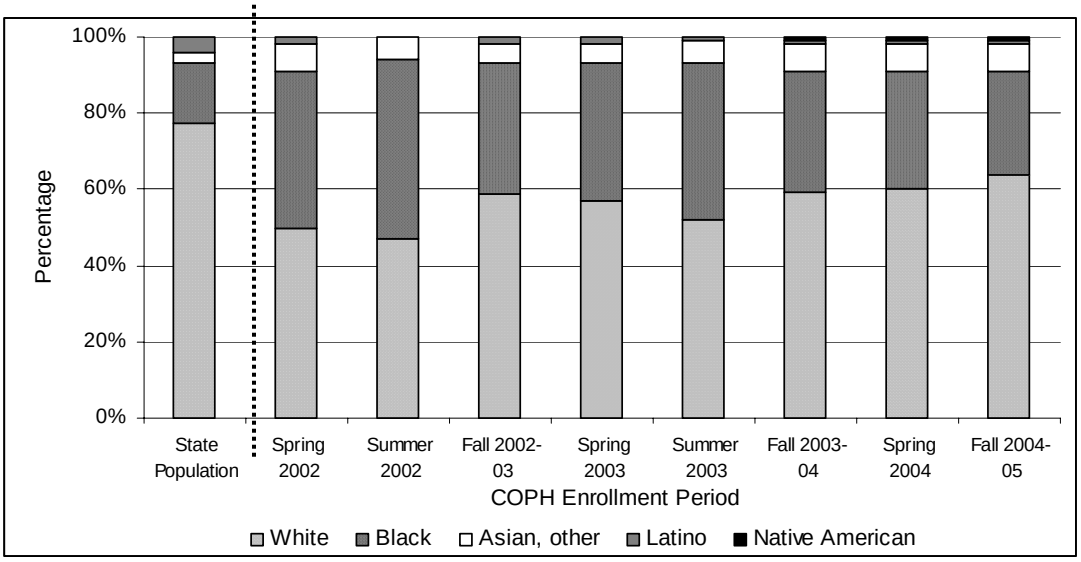


Figure 4.2 Student Distribution by Race/Ethnicity

Obtain federal and philanthropic funding.

Indicator: Number of grants submitted for funding by all COPH faculty

Indicator: Amount of grant funds awarded for all COPH faculty

The COPH continues to leverage funding and bring new research opportunities to the area. Table 4.3 shows the number of grants that were submitted each six-month period from the second half of 2001 through December 2004. In addition, it indicates how many of these grants were successfully funded and which grants are still pending as of December 2004. Overall, COPH has been quite successful in obtaining funding, with an average funding rate of 92 percent across all of these periods. Table 4.4 shows the funding amounts that COPH has received in total and for research. Virtually all of the funding obtained has been for the conduct of research.

Table 4.3 Grants Submitted by COPH Faculty

Six-month Period	Number Submitted	Number Funded	Number Pending	Percentage Funded
Jul-Dec 2001	2	2	0	100%
Jan-Jun 2002	1	1	0	100
Jul-Dec 2002	11	11	0	100
Jan-Jun 2003	7	6	0	86
Jul-Dec 2003	8	5	2	83
Jan-Jun 2004	23	12	7	80
July-Dec 2004	24	14	10	100

Table 4.4 Grant Amounts Funded for COPH Faculty

Six-month Period	Total Amount Funded *	Amount Funded for Research
Jul-Dec 2001	$ 79,342	$ 70,325
Jan-Jun 2002	1,097,414	1,097,414
Jul-Dec 2002	803,835	803,835
Jan-Jun 2003	1,045,450	1,045,450
Jul-Dec 2003	3,356,829	3,356,829
Jan-Jun 2004	1,710,549	1,522,370
July-Dec 2004	1,280,921	1,176,172

* Includes funding for research as well as non-research activities, such as capital improvements, training programs, or organizing conferences.

Conduct research.

Indicator: Number of peer-reviewed papers by all faculty accepted for publication

Indicator: Number of ongoing research projects conducted by all faculty

The successful conduct of research was measured by documenting the number of research projects conducted by the COPH faculty and the number of peer-reviewed publications that are generated from their research. Tables 4.5 and 4.6 show that COPH has increased both the number of publications and research projects each year. The COPH went from three ongoing research projects in 2002 to 35 projects in 2004, and publications have increased almost four-fold during that time.

Table 4.5 Papers Published by COPH Faculty

Year	Number of Publications	Number per FTE
2001	0	0.0
2002	12	0.8
2003	32	1.2
2004	43	1.3

Table 4.6 Ongoing Research Projects by COPH Faculty

Six-month Period	Ongoing Research Projects
Jan-Jun 2002	3
Jul-Dec 2002	12
Jan-Jun 2003	19
Jul-Dec 2003	20
Jan-Jun 2004	21
July-Dec 2004	35

Serve as a [policy and advisory] resource to the General Assembly, the governor, state agencies, communities.

Indicator: Number of service activities to the state

The COPH has engaged in a number of activities that have supported the General Assembly, state agencies, and organizations in the community. Table 4.7 and Figure 4.3 indicate that COPH has increased its service activities since its inception in 2001, moving steadily from 16 to 118 talks from January-June 2004. The number of talks substantially decreased, however, for July to December 2004. The COPH has also increased the number of legislative briefings and special projects during this time period.

Table 4.7 Service Activities by COPH Faculty to the State

Six-month Period	Talks & lectures	Legislative briefings	Special projects
Jul-Dec 2001	16	6	12
Jan-Jun 2002	25	6	4
Jul-Dec 2002	59	3	4
Jan-Jun 2003	85	4	6
Jul-Dec 2003	103	4	4
Jan-Jun 2004	118	13	12
July-Dec 2004	51	13	19

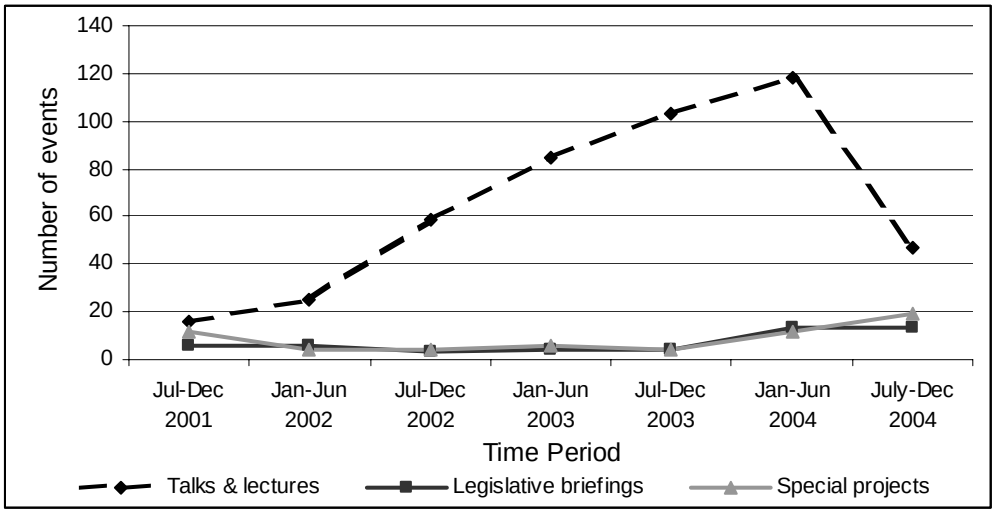


Figure 4.3 Service Activity Trends

ANALYSIS OF SPENDING TRENDS

Act 1576 of 2001 and H.B. 1717 of 2003 appropriated funds to the COPH for the first two biennium periods of the Tobacco Settlement Fund Allocation. Table 4.8 summarizes these appropriations by fiscal year.[4]

Table 4.8
Tobacco Settlement Funds Appropriated to the College of Public Health, by Fiscal Year

	First Biennium		Second Biennium	
Item	2002	2003	2004	2005
(1) Regular salaries	$ 799,215	$2,386,552	$2,500,613	$2,500,613
(2) Personal service matching (PSM)	199,804	596,639	484,316	484,316
(3) Maintenance & operations (M&O)				
(A) Operations	104,492	136,784	196,784	196,784
(B) Travel	24,000	40,000	40,000	40,000
(C) Professional fees	0	0	100,000	100,000
(D) Capacity outlay	154,515	165,000	165,000	165,000
(E) Data processing	0	0	0	0
Annual Total	$1,282,026	$3,324,975	$3,486,713	$3,486,713
Biennium Total	$4,607,001		$6,973,426	

We continued our detailed review of the COPH's expenditures of Tobacco Settlement funds by adding the spending from January 2004 through December 2004. The spending totals for January to June 2004 were added to the amounts presented in the first evaluation report to

[4] The appropriated amounts in Table 4.8 come directly from Act 1576 and H.B. 1717; however, COPH actually received less than the full amount appropriated in these bills.

complete the total spending for FY2004. The spending totals for July to December 2004 were added to reflect spending for the first half of FY2005.

Table 4.9 presents the total Tobacco Settlement funds received and spent by the COPH during this period. In all three full fiscal years, the COPH received less actual funding than what was appropriated. Continuing the trend from prior years, the COPH received $431,918 less than the appropriated amount for FY2004. COPH expenditures in FY2004 decreased somewhat from the prior year. They also spent $212,878 less than the amount received in FY2004. Spending during the first half of FY2005 appears to be increasing. As of December 31, 2004, they had already spent about two-thirds of the FY2005 funds received.

Figure 4.4 highlights quarterly trends in COPH spending through the first two quarters of FY2005. COPH monthly expenditures for regular salaries, personal service matching, and maintenance and operations increased steadily from inception through FY2003, reflecting the initial growth while getting the COPH programming into place. Spending levels declined in the first quarter of FY2004, before steadily increasing through the rest of FY2004 and then leveling off in the first two quarters of FY2005.

The CPOH has three streams of funding: Tobacco Settlement, tuition and general state revenues, and grants and contracts. Figure 4.5 presents the percentage shares, by fiscal year, of the total COPH expenditures funded by these three funding categories. With each fiscal year, the COPH has increased funding from sources other than the Tobacco Settlement funds. Most of this external funding comes from grants and contracts obtained by the COPH faculty.

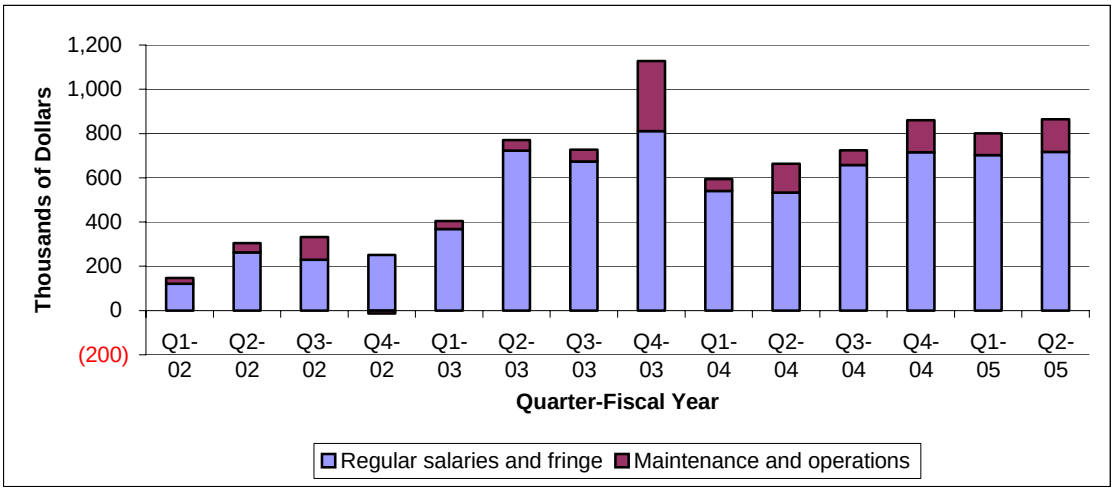


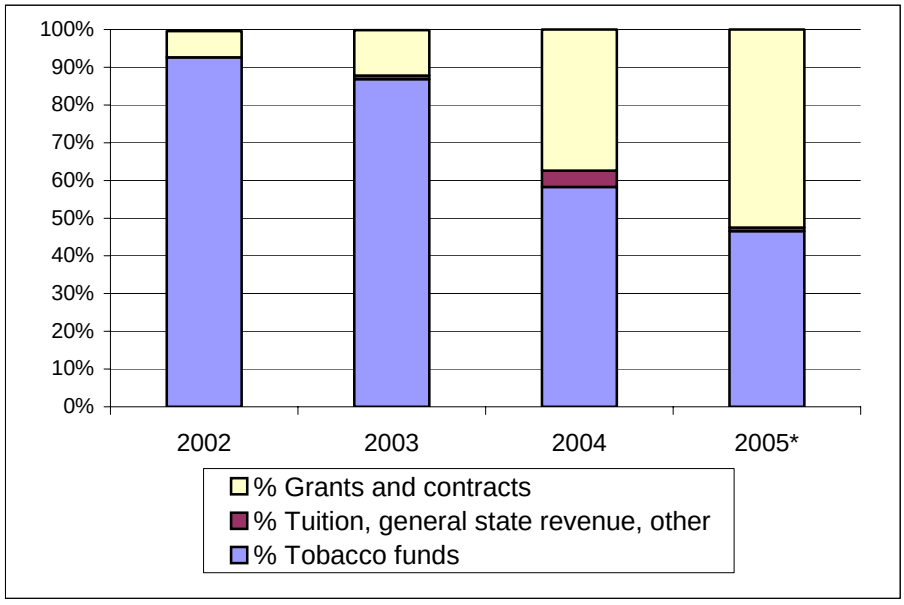
Figure 4.4 COPH Tobacco Settlement Funding Spending by Quarter in Fiscal Years

Table 4.9
Tobacco Settlement Funds Received and Spent by the COPH, by Fiscal Year

	2002		2003		2004		2005	
Item	Received	Spent	Received*	Spent	Received	Spent	Received	Spent**
(1) Regular salaries	$646,972	$ 716,442		$2,130,281	$2,133,695	$2,041,404	$1,798,000	$1,187,326
(2) PSM	133,845	148,836		445,223	484,316	404,707	431,520	231,999
(3) M&O								
(A) Operations	18,398	64,492		140,336	196,784	247,057	96,983	164,714
(B) Travel	24,000	3,652		24,907	40,000	33,024	40,000	34,698
(C) Professional fees	0	0		0	100,000	78,500	90,000	29,978
(D) Capacity outlay	89,797	88,566		288,418	100,000	37,224	30,000	15,436
(E) Data processing	0	0			0	0	0	0
Annual Total	$913,012	$1,021,988	$3,219,800	$3,029,167	$3,054,795	$2,841,917	$2,486,503	$1,664,151

* Data for received amounts for individual categories were unavailable in 2003.

** Amounts spent in first half of fiscal year through December 31, 2004.



* Spending through December 31, 2004

Figure 4.5 Percentage of Spending from Tobacco Settlement Funds and Other Funds by Fiscal Year

PROGRAM-SPECIFIC RECOMMENDATIONS

As noted earlier, the COPH faces several unique challenges because it is a newer program, which has just recently been accredited, and is therefore under close scrutiny. The potential changes in accreditation criteria put the COPH in a difficult position, as they must begin to think ahead, budget, and plan now for how they will meet these new criteria for which they may be held accountable in 2010.

The following recommendations therefore are based on discussions with members of the COPH concerning things that they must begin to address in order to remain accredited if they are held accountable to the new stricter accreditation criteria. These recommendations are in alignment with their long-term program goals.

- **The COPH should increase grant funding and leverage funding from other sources.**

As tobacco money may continue to decrease, the COPH must leverage funding from other sources so that they are able to continue to recruit students and hire the new faculty needed for the different departments and to teach new doctoral level courses.

- **The COPH should develop curricula for the new doctoral programs.**
- **The COPH should develop the two new doctoral programs that will be required to maintain accreditation and recruit students into these programs.**

To have students advance to candidacy by the time that the new accreditation criteria are in place, the COPH must develop two new doctoral programs and recruit students into these new doctoral programs. The two strongest departments they have are Health Behavior and Health Education, and Health Policy and Management, and they are currently beginning discussions to determine potential programs of study for these departments.

- **The COPH should continue to hire more faculty, particularly diverse faculty.**

Due to the creation of two new doctoral programs, the COPH will need to hire more faculty to supervise students in these areas and teach the core courses for these new programs. They therefore have the opportunity to continue to hire ethnically diverse faculty.

Chapter 5
Delta Area Health Education Center

UPDATE ON PROGRAM ACTIVITIES

From July to December 2004, the Delta AHEC has increased its consumer health education activities, continued to leverage additional funding and resources, and maintained its professional health education opportunities in the Delta region. During early 2005, the program was assigned new AHEC evaluators who are working on establishment of goals and objectives for each of the different program activities that the Delta AHEC provides. In addition, the collaboration with other health care providers in the area has improved, specifically with the Helena Regional Hospital. More detail about these changes and activities related to the program indicators and the RAND 2004 recommendations are provided in the following sections.

RESPONSES TO EVALUATION RECOMMENDATIONS IN THE 2004 REPORT

During the past several months, the Delta AHEC has taken the following actions relevant to the recommendations made in the FY 2004 evaluation report.

Recommendation: Build additional program capacity so that needed health education programming for the community can continue to be expanded.

Program response: The Delta AHEC in collaboration with the Helena Health Foundation and the USDA are in the process of building a new Delta AHEC center in Helena. The facility, which is planned to be open in Spring 2006, will enable the Delta AHEC to increase its capacity to conduct consumer health education programming as well as health professional educational training. The Delta AHEC's current 4,500 square foot space will be expanded to 25,000 square feet with the new building providing space for classrooms, offices, a recreation/activities room, a diabetes clinic, a wellness center, medical library and outdoor walking track. Since July 2004, one RN and a prescription assistance staff person have been hired to expand some of the activities provided at the Delta AHEC. Both of the new staff persons are African American which may help the Delta AHEC reach more racial minorities in the Delta.

Recommendation: Expand collaboration efforts to reach disenfranchised populations.

Program response: The Delta AHEC expressed many ways in which they have collaborated over the past year to increase their outreach to disenfranchised populations. The Delta AHEC works closely with the Centers on Aging (COA) because staff are co-located in the Delta AHEC facilities. Both programs help sponsor the consumer health education classes for seniors. The Delta AHEC has been working with the Arkansas Minority Health Commission (AMHC) on some of its activities. For example, the Delta AHEC program director helped the AMHC craft the language used on their consent form for the hypertension program. The Delta AHEC has partnered with the AMHC and the College of Public Health (COPH) to write a federal grant to examine strokes among African Americans in the Delta, but it was not funded. A commissioner on the AMHC will also serve on the Delta AHEC Board, with hopes of improving communication about the two programs activities in the Delta. The Delta AHEC is interested in attending the COPH cultural diversity training, but has yet to coordinate scheduling.

The Delta AHEC is coordinating a project in Phillips county in coordination with the Family Center with UAPB minority grant funding. As part of this project, they will provide health screenings at Riverfest, an annual event that is well attended. The AMHC and COPH are also involved with this project.

The Delta AHEC provided assistance in the schools for the new BMI initiative. Staff provided measurements in schools and information to families that inquired about the results. Delta AHEC staff are part of three Department of Health Hometown Health committees (in Phillips, Lee, Monroe counties). Delta AHEC staff had participated in Hometown Health activities, such as the diabetes foot fair and "Rite Bite" cooking school in Dumas and Helena. With the new facility, the Delta AHEC is working with the Helena Hospital to provide transportation to and from the facility. One of the Delta AHEC staff persons is collaborating with the cooperative extension to provide 4-H activities for Delta youth. A Director of Minority Recruitment and Minority Community Outreach was hired in August to help increase service utilization by racial and ethnic minority populations.

Recommendation: Consider new methods to increase funding for and access to community health education services.

Program response: The Delta AHEC is exploring ways to increase external funding. The Delta AHEC continues to receive Health Education and Training Center support, but their funds were reduced by 13 percent in 2004. They have relied on the local Helena Health Foundation (HHF) for much of the external funds that they receive. The HHF gives $50,000 for wellness programs; part of it is used to cover the church initiative (more details about this initiative can be found in the next section). The Delta AHEC is continuing to apply and successfully receive funding from the Blue and You Foundation. Currently, they are receiving funding from this organization to support nutritional education for low-income pregnant women. Expecting the Best, a program funded through the March of Dimes and Nine West foundation located in Lake Village, Eudora, Dumas, Gould and Dermott is a community-based prenatal program designed for the prevention of birth defects and the improvement the health of babies that the Delta AHEC helped bring to the region. The Delta AHEC also receives a $33,000 grant to fund teen pregnancy prevention activities in Phillips county. The Delta AHEC leadership reported that she is looking for assistance on how to find other sources to supplement their funding. As mentioned earlier, the AHEC partnered with the AMHC to write a proposal for a federally funded research project that would be implemented in the Delta, but it was not funded.

Recommendation: As additional health education programs are developed, focus on programs that have demonstrated effectiveness.

Program response: As mentioned previously, the Delta AHEC is planning to expand their ADA-certified Diabetes Management program to serve newly diagnosed diabetics at Helena Regional Hospital. An African-American nurse has been hired to help implement this program. Plans are currently underway to train the new staff person in the curriculum. The Hospital has already agreed to allow Delta AHEC into their facility to implement the program. This expansion of programming will allow the Delta AHEC to better transition diabetics from an inpatient setting to managing their care independently in their home environment. Given the high rate of diabetes in the Delta region, this program seems to be a good fit with community needs.

The Delta AHEC is continuing its activities using the Search Your Heart, a AHA curriculum, to teach classes in cardiovascular disease prevention. Although federal grant funding for this project that enlisted African American churches is no longer available, the Delta AHEC is continuing the program, which includes Health Fairs as kick-off followed by training of community members in CPR. Classes at the churches are given in such topics as hypertension, smoking cessation, and diabetes. Churches in Phillips, Lee, Monroe, Desha participated over the past year.

The Delta AHEC staff facilitate "Kids for Health," an elementary school health education curriculum developed by Washington Regional Medical Center in Fayetteville. The curriculum has shown improvements in health attitudes and behaviors among students in kindergarten through third grade.

The Delta AHEC has also expanded their prescription assistance services in the Delta region. This program provides volunteers who are trained in accessing discounts on prescription medication for seniors and low-income populations. Many individuals who obtain prescription assistance from the Delta AHEC report increased savings on their monthly drug costs. Some community members have benefited by assistance with obtaining mobility equipment as well as prescription assistance.

Recommendation: Increase resources to conduct program assessment activities.

Program response: The Delta AHEC has been assigned new AHEC evaluators. Over the past few months, the Delta AHEC leadership has been working with the evaluators to automate their program evaluation data collection and analyses process so that the information can be used more effectively for continuous quality improvement activities. In collaboration with the evaluations, the Delta AHEC leadership has been forming individual program goals and objectives to help better plan program activities. The Director reports that an inhouse database exists to track program activities, but it has not been used for evaluation purposes because of incomplete data entry.

In response to our recommendation, the Delta AHEC is currently collecting race/ethnicity information on all its program participants, so that the representativeness of the population it serves can be tracked over time. In the July-Dec 2004 time period, the rate of African-Americans served as part of the consumer education activities was tracked. As evidenced by the rates shown in Table 5.3 in comparison to the total population encounter rates in Table 5.2, in most cases, African Americans are being served at a higher rate than the total population. On the other hand, Hispanics are served at a lower rate than the total population.

The proportion of African Americans participating in the health professional activities is lower than the consumer education activities. There is a need to bring more minority health care professionals to the area so that minority populations are offered the choice of receiving care from someone of the same race/ethnicity.

Recommendation: Use the next appropriation cycle to adjust the distribution of the budget line items so that the appropriation better represents the Delta AHEC program spending needs.

Program response: As noted in the 2004 evaluation report, the Delta AHEC was challenged by the constraints posed by the tobacco settlement appropriations, which establishes a maximum amount of funds that can be spent in each category and prohibits switching funds across categories without special permission. This issue was not uncommon among the seven

funded programs. In order to address this a request was made to adjust the FY2005 appropriation, which was approved by the legislative Peer Review Committee (see Chapter 2 for more details).

Recommendation: Continue to engage and educate local physicians.

Program response: The Delta AHEC has also been able to renew its relationship with the Helena Regional Hospital to offer more educational training opportunities for students in the Delta area. For example, the MASH program is going to start up again at the hospital. In early 2004, Delta AHEC staff conducted "road trip" visits to local physicians to inform physicians and their staff about the services available through the Delta AHEC, like diabetes education. Delta AHEC staff have provided information to local pharmacists about their prescription assistance program to increase utilization. As mentioned earlier, the diabetes education program is being expanded to engage patients in Helena Hospital so that they have a link to the program before they are released from inpatient care. Also staff report that the increased referrals to the diabetes education and prescription assistance programs demonstrates support by local physicians. An advisory board for the diabetes education program was established that also includes physician involvement.

FIVE-YEAR AND SHORT-TERM GOALS

The Delta AHEC identified four long-term goals for its programs:

1. Expand consumer health education activities that address the region's health problems.
    a. Programs will be operating out of new Delta AHEC building by Spring 2006.
    b. Expand consumer health education services 20 percent by 2010.
2. Improve program evaluation activities.
    a. Data collection and analyses will be automated by Spring 2007.
    b. Conduct annual program improvement processes, including monitoring programs for culturally appropriate content through 2010.
3. Implement a marketing program for the Delta AHEC.
    a. By Spring 2006, establish a marketing committee, identify a staff person to implement and support program, develop strategies to recruit health professional students, engage and educate health care professionals, and promote consumer health education activities.
    b. Implement and maintain marketing program and annual fundraising events through 2010.
4. Become a provider of continuing education for nursing by Spring 2010.
    a. By Spring 2006, identify program staff and complete a needs assessment (i.e., location, method of delivery, job role, educational background).
    b. Complete accreditation process, and system for processing paperwork by 2007.
    c. Introduce course offerings in 2007 and maintain through 2010.

The Delta AHEC has set goals that are consistent the AHEC mission to provide consumer health education and also provide health professional training. The goals outline activities that they are already planning. A new Delta AHEC center is being built that will help expand

activities. The program evaluation processes are being examined for opportunities to automate the data collection and analyses pieces. Planning is underway to help support a marketing program to increase student training in the Delta, expand health care professional education, and recruit more residents to consumer health education activities. Staff are working towards building the infrastructure needed to provide nursing continuing education by 2010.

PERFORMANCE ON PROCESS INDICATORS THROUGH DECEMBER 2004

Three indicators were selected to represent the overall progress of the Delta AHEC in meeting the goals of the initiated Act. These indicators were derived in 2002 as part of the initial evaluation efforts. Data on the indicators from the prior year was provided to RAND in July 2004 and January 2005 and supplemented by annual site visits conducted in the Spring and quarterly progress reports. The Act language is bolded in text below, followed by the indicator developed to address it.

Increase the number of communities and clients served through the expanded AHEC/DHEC offices.

Indicator: Session encounter rates per 1,000 residents, by residents in the Delta region participating in the AHEC health education and promotion programs, by type of program

Session encounter rates are calculated from counts of the number of encounters for participants in each program. Encounter rates offer the advantage of capturing the intensity of program use, which drives the staffing requirements of the program. The exception is the Kids for Health program, for which the counts are unduplicated numbers of participants. We note that the rates presented are calculated based on the total population of the Delta region (i.e., 157,725 residents in 2001, 156,711 in 2002, 155,695 in 2003, and 154,681 in 2004). Using total population as the denominator for all programs allows us to sum the encounter rates across programs to obtain a measure of total activity rates (see final row in the table). However, many services target a subgroup of Delta residents (e.g., Adolescent Health programs targets youth and Geriatrics programs target older adults), and it would be informative to also calculate rates based on the targeted population group. However, we were unable to determine target populations for many of the programs (e.g., number of Delta residents eligible for the Sickle Cell program).

As can be seen in Table 5.2, session encounter rates increased over the last six-month reporting period from 73.2 per 1,000 residents in January to June 2004 to 154.1 in July to December 2004 (110 percent). Overall, rates increased by 70 percent in 2004 (227.3 per 1,000) over 2003 (133.2).

Activities with increased encounter rates. The most recent reporting period (December 2004) indicated increased encounter rates in nine of the Delta health education activities:

- A variety of geriatric education groups, including caregiver support groups, and the CLASSICS program focusing on health education, social activities, smoking cessation, and exercise
- Health screenings for cardiovascular disease, sickle cell, obesity, and diabetes
- Kids for Health – a weekly health education curriculum for children in K-3rd grades that meets state standards for health education and includes tobacco prevention

- Sickle Cell Project – home visits, education, screenings, and support groups for families and individuals affected by sickle cell
- Tobacco cessation and prevention programs– provides behavioral and nicotine replacement therapies and tobacco prevention education
- How Healthy is Your Industry? – workplace health promotion program for regional businesses that includes on-site health screenings
- Health professional mentoring program – for minority and disadvantaged youth (grades 7 to 12) to foster interest in health careers and to reinforce healthy lifestyles
- Diabetes education, one-on-one clinical management, and support groups

New activities. In the last reporting period, five new programs were initiated using the Tobacco Settlement Funds that the Delta AHEC receives:

- Prescription Assistance
- Prenatal/Healthy and Teen Parenting – parenting education programs and prenatal care
- STI Education – sexually transmitted disease education
- Comprehensive Health Education (CHE) for Adolescents
- Substance Abuse Prevention

Activities with lower encounter rates. Decreased encounter rates were found in seven activities:

- Asthma education training of school nurses and teachers – to help them address needs of their students who suffer from asthma includes the detrimental effects of tobacco smoke and smoking. The Director reported that staff departure attributed to this decrease during that last reporting period. Efforts are underway to obtain new staff that will take on this training.
- CPR for consumers
- Exercise programs that promote cardiovascular endurance, flexibility, muscular strength and healthy body weight
- Teen pregnancy program
- MASH and CHAMPS-high school and junior high school summer programs that educate and promote health professional careers
- Medical library services-health-related literature and internet searches, access to health journals, videos and teaching modules for health professionals, students, and consumers
- How Healthy is Your Faculty? – workplace health promotion program for regional schools that includes on-site health screenings

Table 5.2 Session Encounter Rates per 1,000 Delta residents for Delta AHEC Programs

	July, '01-Dec, '01	Jan, '02-June, '02	July, '02-Dec, '02	Jan, '03-June, '03	July, '03-Dec, '03	Jan, '04-June '04	July, '04-Dec, '04
Asthma Education	0.96	2.33	4.29	0.72	0.83	0.05	0.00
CPR for Consumers	0.15	0.18	0.34	2.15	3.17	1.98	1.52
Exercise Programs - Aerobics/Tai Chi	0.99	2.25	4.9	4.5	8.58	23.72	20.72
Geriatric Education Support Groups	0.41	0.48	0.61	3.35	5.86	2.83	8.15
Health Screenings	0.69	1.19	1.76	15.63	15.6	10.38	19.38
Kids for Health*	0	4.05	2.46	2.47	4.45	8.61	38.94
MASH	0.08	0.13	0.23	0.13	0	0.18	0.01
Medical Library Services/Consumers	0.13	0.15	0.21	4.68	3.65	3.55	0.79
Sickle Cell Project	0.19	0.49	0.84	4.62	3.19	2.11	4.60
Teen Pregnancy Program	0.17	1.97	2.85	9.58	10.19	5.11	2.83
Tobacco Prevention and Cessation Program	2.85	4.19	5.27	1.66	16.87	9.04	28.08
CHAMPS	NA	0.05	0.09	0.03	0.06	0.09	0.00
How Healthy is Your Faculty?	NA	1.55	2.3	4.48	4.3	2.28	0.00
How Healthy is Your Industry?	NA	0.25	0.5	0.77	0.82	1.23	7.97
Mentoring Program for Minority/Disadvantaged Youth	NA	0.06	0.09	0.83	0.32	0.73	6.17
Diabetes Education	NA	NA	NA	0.6	0.91	1.33	6.29
Prescription Assistance	NA	NA	NA	NA	NA	NA	0.96
Prenatal/Healthy and Teen Parenting	NA	NA	NA	NA	NA	NA	4.55
STI Education	NA	NA	NA	NA	NA	NA	0.26
Comprehensive Health Education (CHE) for Adolescents	NA	NA	NA	NA	NA	NA	1.24
Substance Abuse Prevention	NA	NA	NA	NA	NA	NA	1.58
Total Encounter Rates	6.62	19.32	26.74	56.20	77.12	73.22	154.05

NA Data not available

* The rates for Kids for Health are number of participants per 1,000 Delta residents, rather than number of encounters

In addition to these encounter rates, the Delta AHEC is also tracking the race of the participants in their consumer health education activities, as recommended in the past RAND report. Table 5.3 indicates the encounter rates of African-Americans and Hispanics for the different consumer health education activities. These are based on estimates using the census data from the seven Delta counties. The 2004 population estimate used in our analyses for African Americans was 67,918 and for Hispanics, 3,672. These data indicate that African-Americans are participating at a higher level as compared to the entire population on almost all

activities (in exception are rates for Exercise Programs and Medical Library Services for Consumers). Rates for Hispanics are lower than the entire population figures.

Table 5.3 Session Encounter Rates for Delta AHEC Programs by Race, July through December 2004

Delta AHEC Program	African American	Hispanic
Asthma Education	0.0	0.0
CPR for Consumers	2.1	0.0
ExercisePrograms-Aerobics/Tai Chi	11.8	0.0
GeriatricEducation-Support Groups	10.7	3.8
Health Screenings	24.9	6.5
Kids for Health	75.5	14.7
MASH	<0.1	0.0
Medical Library Services/Consumers	1.8	3.0
Sickle Cell Project	8.9	0.0
Teen Pregnancy Program	5.7	1.1
Tobacco Prevention and Cessation Program	43.0	2.5
CHAMPS	0.0	0.0
How Healthy is Your Faculty?	0.0	0.0
How Healthy is Your Industry?	10.7	0.0
Mentoring Program for Minority/Disadvantaged Youth	11.1	0.0
Diabetes Education	8.7	0.3
Prescription Assistance	1.2	0.0
Prenatal/Healthy and Teen Parenting	10.3	0.0
STI Education	0.6	0.0
Comprehensive Health Education (CHE) for Adolescents	2.3	2.2
Substance Abuse Prevention	3.3	0.8
Total Encounter Rates	232.8	34.9

The new AHEC shall be operated in the same fashion as the other facilities in the UAMS AHEC program including training for students in the fields of medicine, nursing, pharmacy, and various allied health professions, and offering medical residents specializing in family practice. The training shall emphasize primary care, covering general health education and basic medical care for the whole family.

Indicator: Number of primary care and family practice training session encounters for students and health care personnel in the fields of medicine, nursing, pharmacy, and allied health professions and number of students supported by the AHEC

The Delta AHEC is also measuring the number of training session encounters that occur for health care students and professionals in their facilities in order to assess their compliance with the Act's intent regarding health care training. Table 5.4 shows the number of training session encounters and students involved in the different training activities. For the most recent reporting period, the percentage of encounters that were attended by African Americans and

Hispanics is presented in Table 5.5. Almost half of the CPR for Professionals and Medical Library Services for professionals sessions were completed by African Americans.

Table 5.4 Delta AHEC Training Encounters for Health Care Students and Personnel and Number of Nursing Students Supported by the AHEC.

	July, '01-Dec, '01	Jan, '02-June, '02	July, '02-Dec, '02	Jan, '03-June, '03	July, '03-Dec, '03	Jan, '04-June, '04	July, '04-Dec, '04
Continuing Medical Education	74	126	177	477	1342	1471	713
CPR for Health Professionals	23	21	43	49	43	55	165
Medical Library Services/Professionals	42	49	77	314	412	607	499
Total Session Encounters	139	196	297	840	1,797	2,391	1,215
Nursing Education Program (number of students)							
BSN and MSN	2	3	4	10	12	12	15
LPN Program	NA	NA	NA	23	13	11	0
CNA Program	NA	NA	NA	23	25	7	328
Total Students Participating	2	3	4	56	50	30	443

Table 5.5 Percentage of Delta AHEC Training Encounters for African American and Hispanic Students, July through December 2004

	Number of Encounters	Percentage African American	Percentage Hispanic
Continuing Medical Education	713	NA	NA
CPR for Health Professionals	165	46.7	0.0
Medical Library Services/Professionals	337	49.9	1.8
Total Session Encounters	1,215	20.2	6.7
Nursing Education Program (students)			
BSN and MSN	15	46.7	6.7
LPN Program	0		
CNA Program	328	68.3	0.0
Total Students Participating	443	52.1	0.2

Delta AHEC, in collaboration with the UAMS Department of Family and Preventive Medicine Residency Program, sponsors a one month, OB/GYN rotation for family practice residents. The majority of participants are racial minority students. Additionally, the Delta AHEC sponsors medical preceptorships for 1st and 2nd year medical students and a senior family practice rotation for 4th year students. Tables 5.5 and 5.7 indicate that many of the participating nursing and medical students are African-American.

As stated in the previous RAND report, the Delta AHEC does not have a medical residency program, although such a program is specified in the Act and also is part of the scope of services for all AHECs in the UAMS system. Lack of infrastructure is seen as the key barrier

to support for a residency program in the Delta. A pharmacist training program is also not possible due to limited resources. However, consumer education efforts by the Delta AHEC far exceed those delivered by other AHECs in the state, suggesting that the Delta AHEC is using effectively the resources it has available.

The AHEC supports health care training activities for other health professionals, such as RN to BSN and BSN to MSN programs that are offered by UAMS through the internet. The Delta AHEC also supports licensed practical nurse (LPN) and certified nursing assistant (CNA) programs. Students and professionals use the AHEC interactive video training system that serves the Delta region, which allows them to get training without having to leave their communities.

The Delta AHEC is planning new recruiting and training activities. This summer, an intern that is a pre-medical student at Washington and Lee University is planning to spend the summer assisting Delta AHEC staff with the MASH and CHAMPS program and will be involved in some physician shadowing as well. The Delta AHEC is also planning a program to recruit students to healthcare professions in collaboration with Philander Smith College.

Increase access to a primary care provider in underserved communities.

Indicator: Number of new primary care providers recruited to serve the Delta region including physicians, nurse practitioners, nurses, medical students, pharmacists/students, and allied health professions

Table 5.6 shows the number of health care professionals recruited to the area and medical student training programs as organized by the Delta AHEC, and Table 5.7 shows the percentage of those recruited who were African American or Hispanic. Recent changes in federal legislation has made it easier to recruit physicians in the West Memphis area. Physicians that have initiated their practice there on a J1 visa are no longer required to return home after three years. The Delta AHEC reported that three physicians that were working under a J1 visa had continued to practice there after the three year visa limit ended. As part of an effort to recruit minorities into health careers and to provide local youth with a mentor, the Delta AHEC secured a UAMS faculty appointment for a minority family practice physician. Although indicated in Table 5.6, the Delta AHEC does not actively recruit allied health professionals or pharmacists.

Table 5.6 Primary Care Providers Recruited by the Delta AHEC

	July '01-Dec '01	Jan, '02-June, '02	July, '02-Dec, '02	Jan, '03-June, '03	July, '03-Dec, '03	Jan, '04-June, '04	July, '04-Dec, '04
Recruitment for:							
Allied health professionals	NA	3	4	0	0	0	0
Nurses	NA	12	16	3	0	4	24
Pharmacists	NA	0	0	0	0	0	0
Recruitment for physicians:							
MATCH	NA	0	5	0	0	1	0
Preceptorships	NA	2	3	3	10	20	4
Rural loans	NA	0	0	0	4	0	0
Senior rotations	NA	1	2	5	6	15	5
Residents in OB/gynecology rotations	NA	2	2	2	10	5	1
Total providers recruited	NA	20	32	13	30	45	34
Telemedicine encounters	NA	NA	NA	NA	NA	48	5

Table 5.7 Percentage of Primary Care Providers Recruited by the Delta AHEC Who Were African American and Hispanic, July through December 2004

	Number of Providers Recruited	Percentage African American	Percentage Hispanic
Recruitment for:			
Allied health professionals	0		
Nurses	24	20.8	4.2
Pharmacists	0		
Recruitment for physicians:			
MATCH	0		
Preceptorships	4	25.0	0.0
Rural loans	0		
Senior rotations	5	60.0	0.0
Residents in OB/gynecology rotations	1	0.0	0.0
Total number of providers recruited	34	26.5	2.9
Telemedicine encounters by video	5	60.0	0.0

ANALYSIS OF SPENDING TRENDS

Act 1580 of 2001 and H.B. 1717 of 2003 appropriated funds for the Delta AHEC for the first two biennium periods of the Tobacco Settlement Fund Allocation. Table 5.8 details the appropriations by fiscal year.

The following analysis updates the Delta AHEC expenditures with spending from January 2004 through December 2004. Because December 2004 is the middle of the second year

of the second biennium, no year totals for FY2005 are presented, and it is not possible to fully detail expenditures in the second biennium.

Table 5.8
Tobacco Settlement Funds Appropriated to the Delta AHEC, by Fiscal Year

	First Biennium		Second Biennium	
Item	2002	2003	2004	2005
(1) Regular salaries	$587,500	$1,273,000	$1,347,405	$1,347,405
(2) Personal service matching (PSM)	117,500	254,600	245,270	245,270
(3) Maintenance & operations (M&O)				
(A) Operations	120,000	340,800	340,800	340,800
(B) Travel	11,000	41,000	41,000	41,000
(C) Professional fees	0	0	0	0
(D) Capacity outlay	33,000	350,000	350,000	350,000
(E) Data processing	0	0	0	0
Annual Total	$869,000	$2,259,400	$2,324,475	$2,324,475
Biennium Total	$3,128,400		$4,648,950	

Table 5.9 presents the total annual Tobacco Settlement funds spent by the Delta AHEC through December 2004. The Delta AHEC spent less than its total appropriated budget in FY2004, but it did spend more than the appropriated amount in certain categories while spending less in other categories. For FY2004, the AHEC under-spent its funds in regular salaries, travel, and capacity outlay and over-spent funds in personal service matching, operations, and professional fees.

Table 5.9
Tobacco Settlement Funds Spent by the Delta AHEC, by Fiscal Year

Item	2002	2003	2004	2005*
(1) Regular salaries	$473,503	$1,057,68	$1,132,323	$584,337
(2) PSM	98,856	228,551	250,530	137,383
(3) M&O				
(A) Operations	140,308	390,060	415,422	119,564
(B) Travel	34,750	62,629	26,589	9,706
(C) Professional fees	7,351	(7,086)	7,700	0
(D) Capacity outlay	82,853	439,488	12,326	2,802
(E) Data processing	0	0	0	0
Annual Total	$837,621	$2,171,323	$1,844,890	$853,792

* Funds spent for half the year through December 31, 2004.

Figure 5.1 highlights quarterly cross sections of Delta AHEC spending from FY2002 through the first two quarters of FY2005. After peaking in the fourth quarter of FY2003, monthly expenditures for maintenance and operations dropped markedly in early FY2004. Spending in this area increased somewhat through the remainder of FY2004, before dropping off

again in the early quarters of FY2005. Quarterly spending in FY2004 and the first half of FY2005 is at somewhat higher levels than spending in earlier years.

Monthly expenditures for regular salaries and personal service matching also peaked in the fourth quarter of 2003, and then dropped in the first quarter of 2004. Spending in these areas increased through the rest of FY2004 before stabilizing in the early part of FY2005.

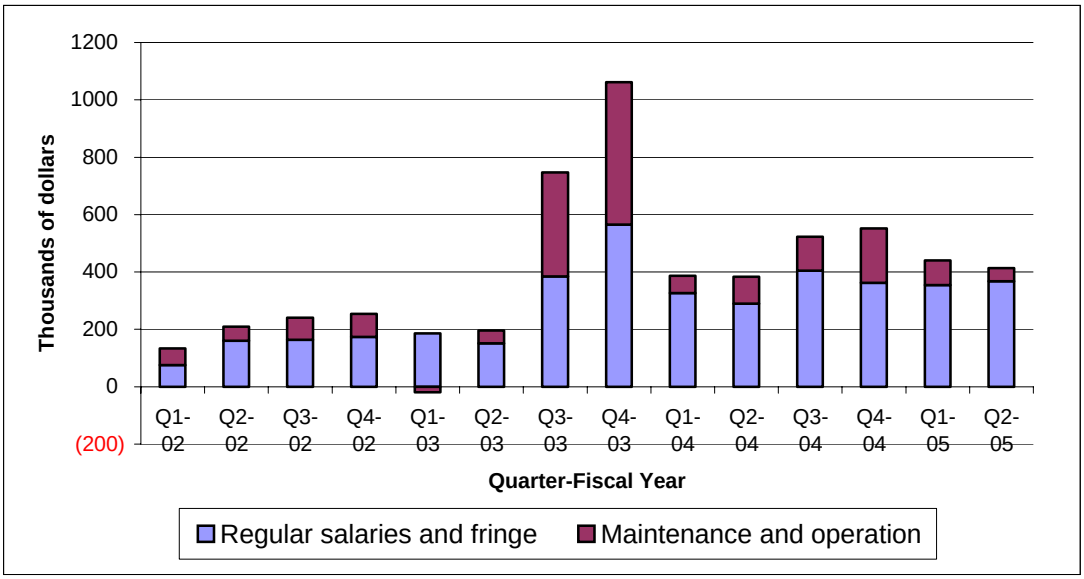
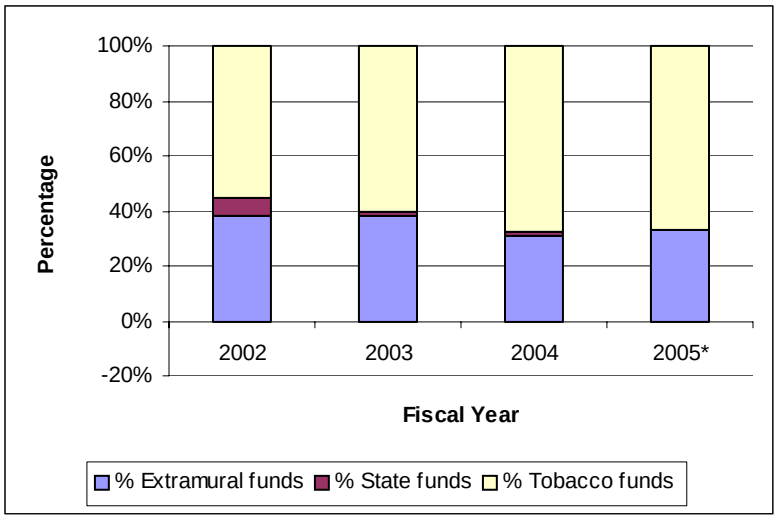


Figure 5.1 Delta AHEC Tobacco Settlement Fund Spending, by Quarter of Fiscal Years

The Delta AHEC has three streams of funding: Tobacco Settlement funds, grants and donations, and general state funds. Figure 5.2 shows the percentage of Delta AHEC spending attributed to each of these funds from FY2002 through the first half of FY2005. Tobacco Settlement funds account for the largest amount of spending, representing 55 to 68 percent of the AHEC's overall spending. The AHEC continues to use these funds to leverage funding from grants and donations. The percentage of the Delta AHEC's spending from grants and donations remained fairly constant through the first half of FY2005, representing over one-third of their total spending.



* Spending through December 31, 2004.

Figure 5.2 Percentage of Delta AHEC Budget from Tobacco Settlement Funds, by Fiscal Year

RECOMMENDATIONS

The Delta AHEC is expanding its activities in line with the mission specified in the Act. We encourage the AHEC to continue to follow the recommendations specified in the 2004 Biennium report to guide their future program activities.

Now that the Delta AHEC is tracking race and ethnicity, it will be in a better position to monitor its outreach to disadvantaged racial and ethnic minority populations. The data from 2004 indicate that the Delta AHEC is reaching more African-Americans than other populations for most of their consumer health education activities. The rate of African-Americans participating in the Delta AHEC's health care professional training is around 50 percent while the number of primary care providers recruited to the region is lower. The Delta AHEC has had less participation by the Hispanic population in the region. With increased resources for minority recruitment and outreach (by the hiring of this staff position), it is expected that the Delta AHEC will expand their activities that involve racial and minority populations. Once better program evaluation activities are in place, the Delta AHEC can initiate more strategic efforts to implement programs that are serving the needs of the population.

Chapter 6
Arkansas Aging Initiative

UPDATE ON PROGRAM ACTIVITIES

Since the summer 2004, the Arkansas Aging Initiative (AAI) continued to expand it's programming to older adults and other community members as well as to health care professionals across the state. These efforts culminated this year in special recognition by the state legislature in the form of House Resolution 1018 "recognizing and commending the Arkansas Aging Initiative for its development and implementation of a comprehensive geriatric health care and education program for senior citizens living in rural Arkansas." The resolution recognized the AAI's efforts to leverage Tobacco Settlement appropriations with funds from private sources, foundations and grants as well as the ultimate goal of the AAI to make geriatric health care services available within 50 miles of every older adult in the state. The resolution also singled out Dr. Claudia Beverly, director of the AAI, for special commendation.

Update on Centers on Aging

All of the Centers on Aging (COAs) are now fully operational and providing educational opportunities to older adults, their families, other community members, and health professionals across the state. All but one of the COAs also has an associated senior health center (SHC) providing geriatric health care services to older adults in those regions and supporting educational efforts in the community. Below is a description of the progress being made in each region to develop their education programs and build their geriatric health care capacity.

Schmieding Center (Northwest COA): All satellite sites (in Bella Vista, Harrison, and Mountain Home) are now fully staffed with the funding currently available. In the Fall of 2003, Bella Vista had its official grand opening. Additionally, the Northwest Health System moved its SHC adjacent to the COA in the same building last year. All of the sites in the Northwest region are developing partnerships with different programs to build capacity. In some areas, they are working with the area agencies on aging and faith-based organizations for educational activities. A community advisory committee has not yet been established in this region, but major efforts will be put forth in the next 12-18 months. In part, due to the funding they have from the Schmieding Foundation, the COA does not feel pressure to allocate staff resources to fundraising. However, they have made substantial progress in developing their caregiver education materials, and they are preparing a marketing plan to sell the three courses they have established across the country. The sale of this curriculum will be an important source of income to the Schmieding Center and will be used to start an endowment for the Center.

South Arkansas COA (SACOA): SACOA continues to develop good programs and expand their availability to outlying counties. Due to the Senior Health Clinic's success and being at full capacity, they are making plans to expand. They have developed a building committee and are now in consultation with an architect to develop plans for a larger clinic. They have also developed a sub-committee to the building committee, the building finance committee, which has been essential in their assessment of options to finance new space. The plans for the new building will ensure that both the education and clinical programs remain under one roof.

Texarkana: The COA is located in the AHEC building. Due to space constraints and needs of the AHEC, the COA has now been moved for a third time. It is now located on the third floor of the building, which makes their presence somewhat diminished. They would like to move to another location so that they can be closer to the SHC but have not yet identified another acceptable space. The SHC is operational, but according to AAI leadership, it is not being optimally managed because it is not a priority to the hospital. A major constraint is that the clinic and the hospital are located across town from the COA, on the Texas side of the border. The AAI leadership met with legislators to discuss co-locating the clinic and COA but they do not want the COA to be located in Texas. The community advisory committee is very active in this region. There are 20-25 committee members and the committee director is a local physician. Several members are currently working to address the challenges in the region and try to get both the COA and the SHC under one roof.

COA-Northeast (COANE): This region has had several challenges due to changes in staffing and community involvement. In the middle of 2004, NECOA lost its education outreach coordinator, but subsequently identified a nurse to take over this position. Communication between the AAI leadership and the COANE education director has improved substantially over the last year. The education director continues her commitment to having programs in each of the 14 counties in her region, but this will be a challenge because of limited funding and the terrain in this region is difficult to traverse. The SHC is doing very well and is seeking another geriatrician. The Community Advisory Committee chair has stepped down from his position because he was offered the chair of the UAMS foundation. They have not yet identified a new chair. Although the chair had been strong, the committee as a whole was not very well established, so there is a need to build the committee up again when new leadership is appointed.

South Central COA (Pine Bluff): The COA in Pine Bluff has maintained a very strong educational program despite some staffing challenges. The Center lost its education outreach specialist, and its leadership has decided to promote the assistant to the Education Director to be the outreach specialist. They also plan to hire an outreach coordinator in Hot Springs in collaboration with Levi Hospital if the fiscal year 2006 budget will be sufficient to support that position.

Delta COA: The AAI leadership is still concerned about the development of the Delta COA. The Reynolds COA staff have worked closely with the COA Education Director to increase her community outreach, and they are working to hire an assistant and other part time help. Communication between the Education Director in West Memphis, and the education outreach coordinator in Helena, has improved in the last year. A third education outreach staff position in the southern part of the Delta was eliminated due to funding shortages in the region, thus concentrating education efforts primarily in West Memphis and Helena and their surrounding counties. Even given the perceived challenges in this region, consumer and paraprofessional educational efforts have far surpassed most other regions.

To date, the Delta region has not been successful in establishing a SHC. In July of 2004, the COA staff in West Memphis moved to a clinic space in Crittendon Hospital, which is where the SHC would also be located when developed. There has been some discussion about partnering with the University of Tennessee and Methodist Hospital in Memphis to bring the necessary staff to West Memphis. However, the hospital staff have not yet met with the university to begin developing the plans. This initial meeting is the responsibility of Crittendon Hospital to set up and they have not made the connection yet. If they can establish this

relationship, a geriatrician from Memphis will be hired on and serve as the director of the COA and the direction for the region will move from Helena to West Memphis.

Ft. Smith COA: The grand opening of the Fort Smith COA took place in October, 2004. Physicians at Sparks and St. Edwards hospitals share the Directorship of the COA. These two hospitals were each originally going to run SHCs and the directors of the SHCs would share the director position at the COA; one would be Director and the other Associate Director and then switch every year. Currently, St. Edwards does not have a geriatrician interested in the SHC on staff so the COA leadership decided that there would be no Associate Director until appropriate staff is available at St. Edwards. Still, St. Edwards staff remains interested in the collaboration and continues to attend meetings and are actively involved in education efforts. The Education Director resigned in June 2004 and they hired a replacement in December. There has been no community advisory committee activity in part because of the staffing issues that have arisen in the last year.

Addressing Fundraising and Proposal Writing

As described above, community advisory committees have varying levels of involvement in supporting the COAs and SHCs in each region. The Reynolds COA leadership want each of the sites to do fundraising and set up their own endowments. One of the roles of the CAC is to raise funds for the region to leverage the Tobacco Settlement funding. One avenue to raising funds for educational activities is through pharmaceutical companies. The Texarkana COA has been particularly successful in raising funds through these efforts. SACOA had a very strong CAC and raised close to $1 million, but the committee's activities have slowed in the last two years. The Schmieding Center and the satellite COAs have pursued small amounts of funding but because they receive funds from the Schmieding Center, the pressure to do fundraising has not been felt as keenly as in some other regions. The Delta COA has not been raising funds and in fact, the AAI leadership has cut back the funds going to the Delta region because there is currently no SHC in this region, nor is there a COA Director (Becky Hall is the acting Director).

Relationships with AHECs

As reported in the 2004 evaluation report, the nature of the COA/AHEC relationship varies substantially across regions. The local AHEC serves in an administrative capacity. For example, they perform human resources functions such as payroll and they assist with ordering supplies, paying vendors and managing the budget and financial reporting. The concern was that the AHECs had greater influence over the COA activities than was originally intended, but constructive working relationships continue to improve. The AHEC partners have an important role to play in ensuring that financial accountability is maintained with respect to reporting not only to the AAI administration but also to the Tobacco Settlement Commission and General Assembly.

RESPONSES TO EVALUATION RECOMMENDATIONS IN THE 2004 REPORT

During the past year, the AAI has taken the following actions relevant to the recommendations made in the FY 2004 evaluation report.

Recommendation: The AAI leadership and the regional COAs should continue to emphasize outreach to the counties most distant from the COA facility location.

Program response: With the growth in activity in each COA, more efforts have been made to reach the outer lying counties in each region. The operation of the satellite COAs in the Northwest region have ensured that there is programming in each county. There are still challenges to reaching the most rural areas. In some regions, the education outreach staff are working with religious and other community groups to create more outreach and because of the concerted effort during 2004, older adults from all 75 counties in Arkansas participated in AAI sponsored educational events. However, the AAI leadership and regional staff are aware there is still more work to do in reaching more rural older adults.

Recommendation: The AAI leadership should put more emphasis on and create more opportunities for regions to collaborate and build on the successes of the local COAs.

Program response: The Education Directors and the COA Directors meet in Little Rock with AAI leadership every other month to discuss progress and plan the future development of the Aging Initiative. In March 2005, the Education Directors met prior to the meeting with AAI leadership to discuss ideas and collaborate on programming opportunities. It is expected that they will continue to meet beyond this most recent meeting. In addition, the AAI leadership have developed a new model for educational programming across regions. They will select a topic each year and each region will create education modules and share them with the other regions. The topic selected for this year is dementia, selected as one of the priority conditions reflecting both the priorities of the needs assessments conducted in each region and the health priorities of the state.

Recommendation: Given that many of the regions do not have co-located COAs and SHCs, the AAI might want to consider ways to reduce perceived barriers to services and resources.

Program response: This issue was discussed above as part of the regional updates. Some of the regions are having a difficult time with this issue – most notably Texarkana. SACOA is actually looking for new space in which they might co-locate the COA and the SHC adjacent to each other (they are now one floor away). West Memphis (Delta) will likely have both the SHC and the COA in the same location when they have reach agreement with the hospital on the program.

Recommendation: The AAI budgets should be reconfigured to better reflect the operational and capital needs of the COAs, and these spending needs should be reflected in the allocation of appropriated funds across categories in the next appropriation legislation.

Program response: Over the past year, AAI leadership had meetings with the UAMS Vice Chancellor for Finances to discuss realigning the budget with line item needs. In the 2005 legislative session, the legislative Peer Review Committee approved changes to the FY2005 AAI appropriation that reallocates the funds across appropriation line items in a way that better matches its program spending needs. (See Table 6.10 below.) In particular, funds were reallocated from capital to operations and salaries.

FIVE-YEAR AND SHORT-TERM GOALS

Since its inception, the AAI has developed long-term goals to achieve its mission. The program currently is in the third year of a three-year plan. Prior to our efforts to establish five-year goals with each program, the AAI had planned a summer 2005 retreat to establish another plan with long-term goals for the program.

We want to encourage and build upon the already existing AAI planning process, in particular, because it includes participation by all the regional COAs in the strategic decision-making process. Therefore, at this time we only report the AAI short-term goals to be achieved by June of 2006. More explicit long-term goals will be made available after the AAI's summer retreat when the updated AAI five-year plan will be in place. In the interim, AAI has identified four short-term goals:

1. By June 2006, the AAI will have an established strategic plan for implementation of at least one geriatric best practice guideline in at least three Senior Health Centers.
2. The AAI will offer at least eight opportunities for professional education as guided by the needs assessment and at least one program per county for older adults and their families in collaboration with community partners by June of 2006.
3. By June of 2006, the Aging Initiative will have developed and implemented a uniform database for tracking participants in AAI educational encounters
4. By June of 2006, the AAI will work toward influencing health and social policy by compiling a list of grants, foundations and independent organizations that provide research funding and they will develop a database that will be updated periodically to keep this list current.

Generally speaking, these short-term goals are necessary to fulfill the AAI mission to improve access to high-quality interdisciplinary geriatric health care for older adults, educate professionals and older adults and their families about issues important to older populations, and to influence health and social policy.

PERFORMANCE ON PROCESS INDICATORS THROUGH DECEMBER 2004

As discussed in previous reports, six indicators were selected to represent the overall progress of the Arkansas Aging Initiative. These indicators reflect the goal stated in the Act to "increase the number of Arkansans participating in health improvement activities." The indicators reflect efforts to increase educational encounters: (1) for seniors at each Senior Health Clinic, (2) at classes offered for community members, (3) for healthcare professionals participating in the Arkansas Geriatric Education Center programs, (4) at programs for students in health and social service disciplines, (5) for faculty from regional sites participating in post-graduate education through the Arkansas Geriatric Education Mentors Scholars program in the Arkansas Geriatric Education Center, and (6) for active paraprofessionals and paraprofessional students. A seventh "one-time" indicator was to complete community needs assessments to prioritize needs and activities of the COAs. As mentioned above under the goals section, the AAI will develop and implement a uniform data tracking system in the coming year to help facilitate tracking of these and other process and outcomes indicators.

Increase the educational encounter rate for seniors at each Senior Health Clinics

Indicator: Educational encounter rate for seniors at each Senior Health Clinic.

The goal of this indicator is to ensure the educational outreach of each COA extends to the Senior Health Clinics. The COAs and the SHCs are closely tied together and collaborate to provide needed education for older individuals who are seen in the SHC. Educational encounters can be provided to the patient by the physician, nurse, nutritionist, social worker, or COA staff. Table 6.1 summarizes the educational encounter rate for seniors at each Senior Health Clinic.

The numerator is the number of educational encounters provided in the COA, and the denominator is the number of patients seen in the SHC during the relevant six-month time period. We only report data from 2004 because this indicator was established at the beginning of the year.

Table 6.1 Educational Encounter Rates at Senior Health Centers for Older Adults

	Jan-Jun 2004		Jul-Dec 2004	
	Encounters per Patient	Number of SHC Patients	Encounters per Patient	Number of SHC Patients
Schmieding COA	1.03	6,830	2.02	3,120
– Harrison	**	**	**	**
– Mountain Home	**	**	**	**
– Bella Vista	NA	NA	1.22	1,207
SACOA	0.48	2,840	0.45 *	4,560
Texarkana	NA	NA	NR	NR
COA-NE	0.09	2,200	0.79 *	1,350
South Central COA	0.45	411	0.58	573
Delta COA	**	**	**	**
Fort Smith	0.00	798	1.01	1,614

** The program was not in operation during this time period.
* Based on 5 months of data
NA Data not tracked during this time
NR Not reported

There was substantial variation across regions in the rates of education encounters. This was in part due to the process of developing a system for gathering data, varying data collection start times by the COAs, and inconsistencies in the operating definition of an educational encounter. AAI leadership acknowledged that the rates are being counted differently across sites and more work needs to be done to calibrate this measure across SHCs so that rates can be easily compared in meaningful way. Six of the sites rely on hospital staff or the clinic manager to collect these numbers. The AAI leadership needs to do more outreach to these individuals to improve their consistency in measuring this indicator so that rates can be compared in a meaningful way. Texarkana is not yet collecting this data due to a lack of resources needed for data collection. Additionally, some COAs (noted by asterisks in the table) do not have an associated SHC and thus no data is reported for these regions.

The Schmieding Center increased educational encounters from just over one encounter per visit to more than two per visit between the first and second periods of 2004. The educational encounter rate at the Schmieding Center exceeds that of any other center in part because they have a full-time social worker on staff providing education to patients – no other COA has that level of staffing. Bella Vista and Fort Smith also reported just over one educational encounter per visit in the second period of 2004. Other regions with a COA reported less than one educational encounter per visit. AAI leadership believes that the reported counts may be underestimating the work being done in the SHCs to provide education to patients.

Increase the number of encounters at classes offered for community members

Indicator: Number of encounters at classes offered for community members

Table 6.2 summarizes the educational encounters for each of the COAs for six-month time intervals over the past two years. Generally, there has been an increase in the number of individuals attending classes through the COAs. There were substantial increases in educational encounters for community members in most regions between 2003 and 2004. In Bella Vista, there was an almost fourfold increase in activity between the second period of 2003 and the second period of 2004. Part of the decline in the second half of 2003 and 2004 in several regions could be attributed to fewer activities occurring in November and December due to the holidays.

Table 6.2 Encounters at AAI Classes for Community Members

	Jan-Jun 2002	Jul-Dec 2002	Jan-Jun 2003	Jul-Dec 2003	Jan-Jun 2004	Jul-Dec 2004
Schmieding COA	NR	NR	NR	NR	535	739
– Harrison	**	379	547	429	691	284
– Mountain Home	**	**	**	**	113	399
– Bella Vista	**	**	538	324	1,276	1,226
SACOA	20	755	1,442	973	2,532	1,887
Texarkana	**	296	780	630	1,318	1,463
COA-NE	**	216	1,066	1,509	1,385	1,390
South Central COA	**	**	338	1,182	3,012	1,990
Delta COA	**	**	260	1,526	3,767	3,924
Fort Smith	**	**	**	563	205	699

** The program was not in operation during this time period.

Increase the number of educational encounters for health care professionals participating in the Arkansas Geriatric Education Center's programs

Indicator: Number of educational encounters for health care professionals participating in the Arkansas Geriatric Education Center's programs

Table 6.3 presents counts of educational encounters for health care professionals participating in Arkansas Geriatric Education Center (AGEC) programs. The AGEC is funded by the Health Resources and Services Administration (HRSA) and run jointly by the Reynolds Institute on Aging and the Veterans Healthcare System. The AGEC sponsors geriatric focused conferences and video teleconferences throughout the year. Examples of recent educational efforts include a video teleconference on cardiovascular disease, nutrition and aging, and chronic pain management in older adults. HRSA awarded the AAI Director of Education a supplemental grant to do a series of one-day conferences on mental health issues for the elderly at each COA site. Attendance at these conferences was high and that attendance is reflected in the higher counts for the first period of 2004. AGEC activity has been inconsistent across COAs. This inconsistency is due in part to the fact that while the AGEC activities are available to the state, regions do not always host them in their regions. Only three COAs hosted AGEC programs in the second period of 2004. The majority of AGEC offerings within the regions are video-teleconferences, which have been taped and can be taken out into the counties for outreach, thus the courses can be offered when it is most convenient to the regional COA.

Table 6.3 Encounters at Geriatric Education Center for Health Care Professionals

	Jan-Jun 2002	Jul-Dec 2002	Jan-Jun 2003	Jul-Dec 2003	Jan-Jun 2004	Jul-Dec 2004
Schmieding COA	NR	NR	NR	NR	101	0
– Harrison	**	0	0	0	0	0
– Mountain Home	**	**	**	**	16	0
– Bella Vista	**	**	27	0	0	0
SACOA	0	12	49	114	241	0
Texarkana	**	6	112	0	84	0
COA-NE	**	13	26	76	161	108
South Central COA	**	**	21	8	129	54
Delta COA	**	**	0	20	65	0
Fort Smith	**	**	**	0	76	17

** The program was not in operation during this time period.

Increase the number of educational encounters at programs for students in health and social service disciplines

Indicator: Number of educational encounters at programs for students in health and social service disciplines

Just as the COAs support educational opportunities for health care professionals, they also support educational activities for students in the health and social service disciplines. Training is provided to medical students, geriatric nurse practitioners, nurses, social workers, physical therapists, pharmacists, dieticians and others. Table 6.4 summarizes the educational encounters for students across the COAs. Educational activities are inconsistent over time due to scheduling differences across regions. The South Central and Northeast COAs experienced increases in educational encounters for health and social service students. Harrison's involvement with such educational activities has increased substantially, although we observed a decrease in the number of encounters in the second period of 2004. The Schmieding Center and the satellite COAs in the Northwest region will be offering geriatric training to medical students as part of their third year rotations in the next year so we expect to be seeing an increase in educational encounters in this region in the next year.

Table 6.4 Encounters at AAI Education for Health and Social Service Students

	Jan-Jun 2002	Jul-Dec 2002	Jan-Jun 2003	Jul-Dec 2003	Jan-Jun 2004	Jul-Dec 2004
Schmieding COA	NR	NR	NR	NR	40	0
– Harrison	**	0	0	19	177	74
– Mountain Home	**	**	**	**	0	0
– Bella Vista	**	**	0	0	0	0
SACOA	0	38	450	122	38	34
Texarkana	**	24	19	39	26	0
COA-NE	**	0	0	30	54	111
South Central COA	**	**	12	129	65	94
Delta COA	**	**	0	2	2	1
Fort Smith	**	**	**	0	33	10

** The program was not in operation during this time period.

Increase the number of encounters for faculty from regional sites participating in post-graduate education through the Arkansas Geriatric Education Mentors Scholars program in the Arkansas Geriatric Education Center

Indicator: Number of educational encounters for faculty from regional sites participating in post-graduate education through the Arkansas Geriatric Education Center

The Arkansas Geriatric Education Mentors and Scholars (AR-GEMS) program is a continuing education program for health professionals who work with older adults and who want to improve the way they provide care. The goals of AR-GEMS include the establishment of local networks of providers to promote interdisciplinary health care, and to establish regional training sites for health professionals, students, and faculty. AR-GEMS program requirements include different educational activities using different modes of learning: video teleconference, in-person workshops, self-instruction, and experiential practice in a geriatric setting with a mentor. These programs operate over an extended period of time, which explains the low numbers in Table 6.5. Additionally, these courses are generally only offered once a year beginning in the summer.

Table 6.5 Post-Graduate Encounters at Geriatric Education Center for Regional Faculty

	Jan-Jun 2002	Jul-Dec 2002	Jan-Jun 2003	Jul-Dec 2003	Jan-Jun 2004	Jul-Dec 2004
Schmieding COA	NR	NR	NR	NR	0	0
– Harrison	**	0	0	0	0	0
– Mountain Home	**	**	**	**	0	0
– Bella Vista	**	**	0	0	0	0
SACOA	0	1	0	0	0	0
Texarkana	**	0	2	2	2	0
COA-NE	**	0	0	2	0	1
South Central COA	**	**	7	0	0	0
Delta COA	**	**	0	1	1	0
Fort Smith	**	**	**	0	0	0

** The program was not in operation during this time period.

Increase the number of educational encounters for active paraprofessionals and paraprofessional students.

Indicator: Number of educational encounters for active paraprofessionals and paraprofessional students

Table 6.6 presents counts of educational encounters for paraprofessionals and paraprofessional students. A paraprofessional is an unlicensed individual who provides "hands-on care" to clients that need moderate to maximum assistance. This care is provided under the direction of a health care professional and may be delivered in the home, hospital, community based program or long term care facility. There is substantial variation across regions in the number of educational encounters for paraprofessionals and paraprofessional students. The Delta region had the most educational encounters for active paraprofessionals and paraprofessional students followed by the South Central COA. Texarkana has not made training of paraprofessionals a focus to date. Other regions may not be well equipped to provide support for such educational encounters at this time. For example, Fort Smith COA has had a change in directors, which has affected their performance on this indicator.

Table 6.6 Educational Encounters for Paraprofessionals and Paraprofessional Students

	Jan-Jun 2002	Jul-Dec 2002	Jan-Jun 2003	Jul-Dec 2003	Jan-Jun 2004	Jul-Dec 2004
Schmieding COA	NR	NR	NR	NR	198	166
– Harrison	**	70	185	167	272	37
– Mountain Home	**	**	**	**	0	256
– Bella Vista	**	**	na	33	12	89
SACOA	na	na	135	524	235	195
Texarkana	**	na	na	na	0	0
COA-NE	**	na	na	0	151	98
South Central COA	**	**	na	156	474	499
Delta COA	**	**	34	211	531	769
Fort Smith	**	**	**	57	5	0

** The program was not in operation during this time period.

na Data were not collected for this indicator during this time period.

Note: A paraprofessional is an unlicensed individual who provides "hands on care" to clients that need moderate to maximum assistance. This care is provided under the direction of a health care professional and may be delivered in the home, hospital, community based program or long term care facility.

Conduct Needs Assessments to better understand the needs of the local community and influence local programming

Each COA region completed a needs assessment early in their development stage, which was reported in the first evaluation report. The needs assessments gathered information regarding access to and use of health care, long-term care, and social services in the COA regions, which the COAs used in their initial planning processes.

ANALYSIS OF SPENDING TRENDS

Funds were appropriated for the Arkansas Aging Initiative by Act 1575 of 2001 and H.B. 1717 of 2003 for the first two biennia of the Tobacco Settlement Fund Allocation. Table 6.7 details the appropriations by fiscal year.

Table 6.7 Tobacco Settlement Funds Appropriated to Arkansas Aging Initiative, by Fiscal Year

	First Biennium		Second Biennium	
Appropriation Item	2002	2003	2004	2005
(1) Regular salaries	$ 491,040	$1,222,071	$1,278,528	$1,278,527
(2) Personal service matching	92,408	224,114	232,733	232,733
(3) Maintenance & operations				
(A) Operating expense	59,000	198,515	198,525	198,525
(B) Conference & travel	25,000	56,500	56,500	56,500
(C) Professional fees	0	0	0	0
(D) Capacity outlay	201,552	558,200	558,200	558,200
(E) Data processing	0	0	0	0
Annual Total	$869,000	$2,259,400	$2,324,476	$2,324,475
Biennium Total	$3,128,400		$4,648,951	

Tables 6.8 and 6.9 present the total Tobacco Settlement funds received and spent by the AAI for the first two biennia. Note that, for the second biennium, expenditures for only a half-year of FY2005 are presented (for July through December 2004). The spending is reported by individual COA in Table 6.8 and by appropriation line item in Table 6.9. Each year, AAI received less money than was specified in the appropriations. As shown in Table 6.8, for FY2004, the AAI received a total of $1,631,570, of which $1,412,574 was allocated to the regional COAs. The available funding for COA management and operations is further reduced by the 7.5-percent overhead paid to the AHECs. It used a portion of the central administration funds ($89,600 in the first half of the year) to support a detailed evaluation of the program.

The COAs continued to experience difficulty in conforming their spending to the amounts allocated by the categories specified in the AAI appropriations for the first two biennial periods, which are "locked in" to the fixed appropriation line items. These allocations have not met the financial needs of the COAs. In particular, the COAs consistently report that too much of the appropriation was allocated to capital outlays (which require a minimum expenditure of $2,500) and too little was allocated to operating expenses. Similarly, the amounts appropriated for travel can only be used for out-of-state travel, and in-state travel must be taken from management and operations.[5]

The issue of programming constraints created by the appropriation line item allocations was discussed in the 2004 evaluation report, with a recommendation made that the appropriation for FY2005 be adjusted to ensure that the programs have funding allocations that support their programming needs. As discussed in Chapter 2 and earlier in this chapter, in late 2004, UAMS developed a proposal to make these adjustments for several programs, which was approved by the legislative Peer Review Committee. The resulting adjustments to the AAI FY2005 appropriation are given in Table 6.10.

Tobacco Settlement funds that were not spent in first year of the first biennium were carried over to the second year and were reallocated by the central administration to the individual COAs after the Center on Aging Directors and Education Directors prioritized a list of needs developed by central leadership and the directors. During the first biennium, these leftover funds were used to purchase eight vans, one for each of the COAs, as well as to conduct a needs assessment and an evaluation of the AAI activities. In the second biennium, funds were also carried over from the first year (FY2004) to the second year (FY2005) and were reallocated to the individual COA's and to the evaluation. Of the $265,504 available, $135,000 was allocated to evaluation and the remaining $130,504 was primarily allocated to operating expenses for the COA's. The funds were particularly important for evaluation, as only 7 percent of the funds received for evaluation in FY2004 were spent in that year, and no funds were budgeted for this purpose for FY2005.

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[5] We note that the issue of appropriations constraints and the use of trade-offs to compensate for them are not unique to the AAI. Refer to Chapter 2 for overall discussion of the adjustments made to the FY2005 appropriations for several of the funded programs.

Table 6.8 Tobacco Settlement Funds Received and Spent by the Arkansas Aging Initiative, by Each Center on Aging

Center on Aging	Fiscal Year 2002		Fiscal Year 2003		Fiscal Year 2004		Fiscal Year 2005	
	Received	Spent	Received	Spent	Received	Spent	Received	Spent*
Central Admin.	$248,026	$233,839	$243,876	$424,175	$250,000	$259,448	$218,996	$131,902
Schmieding	15,000	24,136	243,876	212,912	250,000	229,838	209,000	100,488
SACOA	325,000	282,318	243,876	241,719	250,000	210,609	208,194	99,527
COA NE	75,000	74,944	243,876	243,780	250,000	250,001	209,000	113,606
Texarkana	75,000	74,997	243,876	243,876	250,000	204,982	209,000	88,496
Delta COA	30,000	24,072	243,876	130,242	125,000	112,556	159,380	77,838
South Central COA	na	na	243,876	259,066	250,000	243,933	209,000	102,899
Fort Smith	na	na	243,876	176,822	234,152	189,343	209,000	72,964
Evaluation	na	na	0	71,964	140,848	9,443	0	89,570
Annual Total	$768,026	$714,306	$1,951,008	$2,004,553	$2,000,000	$1,710,153	$1,631,570	$857,021

* Represents spending for the first half of the fiscal year (July-December 2004)

Table 6.9 Tobacco Settlement Funds Received and Spent by the Arkansas Aging Initiative by Appropriation Line Item*

Appropriation Line Item	Fiscal Year 2002		Fiscal Year 2003		Fiscal Year 2004		Fiscal Year 2005	
	Received	Spent	Received	Spent	Received	Spent	Received	Spent**
Regular salaries, personal service matching	$525,000	$517,196	$1,445,993	$1,323,226	$1,494,985	$1,362,046	$1,376,731	$675,654
Mainten. and Oper.								
Operating expense	52,144	66,930	198,515	372,314	198,515	280,496	211,177	90,684
Conference, travel	23,000	10,586	56,500	37,315	56,500	25,283	28,542	6,869
Professional fees	0	0	0	0	0	449	0	83,483
Capacity outlay	167,882	119,597	250,000	271,698	250,000	35,894	15,120	0
Data processing.	0	0	0	0	0	5,985	0	331
Annual Total	$768,026	$714,306	$1,951,008	$2,004,553	$2,000,000	$1,710,153	$1,631,570	$857,021

*There are small differences between the "biennium differences" in Tables 6.7 and 6.8 due to rounding.

**Represents spending for the first half of the fiscal year (July-December 2004)

Table 6.10 Adjustments Made to the Line Items in the Aging Initiative FY 2005 Appropriation

	Authorized Appropriation	Reallocated Appropriation
Arkansas Aging Initiative		
Salaries	$ 1,278,527	$ 1,175,000
Personal Services Match	232,733	300,000
Operating Expenses	198,515	604,475
Travel \ Conferences	56,500	20,000
Professional Fees & Services	0	150,000
Capital Outlay	558,200	75,000
Total	$ 2,324,475	$ 2,324,475

Figure 6.1 presents the AAI spending by quarter, broken down by two categories of spending: salaries and fringe benefits and operations and maintenance. Appendix B contains annual numbers for each individual COA, with more detailed reporting by appropriations category. While the quarterly expenditures varied across COA and over time, there was a general upward trend in spending over the course of the first biennium, reflecting the growth in staff of the COAs through the third quarter of FY2003. We also see the large amount of capital spending in the fourth quarter of FY2003, which was when the vans were purchased for the COAs.

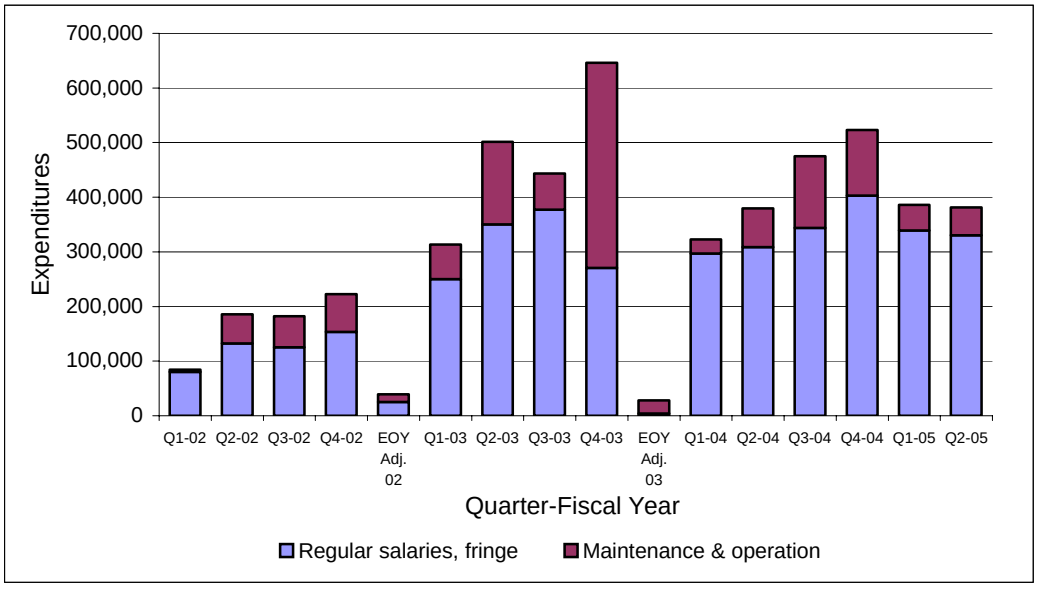

Figure 6.1 Quarterly Expenditures by the Aging Initiative

Spending in the first half of FY2004 dropped to levels similar to early FY2003 and then picked up again in the second half of the year. For the first half of 2005, the COAs are on track to spend the full amount of the appropriation and about the same amount as FY2004. For the individual COAs, substantial fluctuations occurred over time in the amount spent in various categories that are somewhat masked in the figure. This masking is due, in part, to decisions being made by the COAs and AHECs as they sorted out how to pay the salaries of shared staff to the trade-offs being made to conform to appropriations constraints, and to discrepancies in when money is actually spent and when it shows up on the university's financial (SAP) system.

PROGRAM-SPECIFIC RECOMMENDATIONS

The AAI is making substantial progress in reaching out to communities, providing education to older adults, their families, and other community members as well as to healthcare providers in the local areas. The AAI leadership and regional COA staff have successfully turned limited funds into important resources for the state. There is still work to be done however. As the COAs grow, there will be a greater need for AAI leadership and regional staff to leverage the Tobacco Settlement funds to support Aging Initiative activities. Additionally, as the programs grow, there will be a greater need to develop systems that can support the management of data and budgets better. Below are three recommendations that come from our evaluation which address these needs.

- **The AAI needs to make fundraising a higher priority across all regions.**

The AAI has undertaken several fundraising efforts to leverage the Tobacco Settlement funds they receive. One method for leveraging these funds has been to engage a Community Advisory Committee (CAC) in each region to develop and implement fundraising plans to support educational efforts and COA infrastructure. At this time, however, most of the COAs have little, if any, CAC involvement in fundraising. In addition to developing CACs in each region, the AAI needs to continue identifying other funding opportunities through the state and federal governments, foundations, and the private sector, and to pursue proposals with these entities for general infrastructure and programming. The AAI goal of establishing a database of funders is a first step in this effort, but this work needs to be extended to developing fundable proposals.

- **UAMS should consider centralizing responsibility for financial management and reporting to the Reynolds Institute on Aging.**

As reported above, the regional AHECs are responsible for managing the TS funds for each COA. From a financial management perspective and from an evaluation perspective, this arrangement can be challenging at times. Some regions may not receive budget reports in a timely manner and it creates challenges for the AAI leadership in keeping track of the financial health of the program as a whole. While the process to gather budget data was more streamlined this year than it was last year, for RAND to conduct it's spending analysis, we had to go to seven different programs with different ways of sharing the necessary information. As a result, we recommend that the financial management for the AAI be centralized for better planning. The AAI leadership should hire a single individual to be housed in the Reynolds Institute on Aging to manage the budgets of each COA. By doing so, they can centralize the budgeting process and reallocate spending from the AHEC surcharge to salary for the budget staff person. The savings realized by creating a single position can then be used to fund expanded evaluation of the AAI.

- **AAI leadership should work with each COA to improve the consistency in reporting on process indicators and other data needs.**

The educational encounter rate, reported in the process indicators section of this chapter, is currently reported for each COA that has an associated SHC. However, the wide variability in the rates has raised concerns that the definition of the educational encounter rate may be measured differently across regions. The AAI leadership should verify that they are reported consistently and if they are not, to work with each region to ensure there is consistency in their reporting of this and the other process indicators.

Chapter 7
Minority Health Initiative

UPDATE ON PROGRAM ACTIVITIES

From July to December 2004, the Arkansas Minority Health Commission (AMHC) has increased some of its media awareness efforts, continued monitoring of health screening events for minority Arkansans, provided health screenings at rates similar to previous years, and continued offering the Hypertension and Eating and Moving for Life programs. Enrollment continued to increase for the Eating and Moving for Life program while rates for the Hypertension initiative dropped by 45 percent in 2004. Given the low enrollment rates for the Hypertension Initiative, during early 2005 the program developed performance standards and goals expected by the Community Health Centers. The Act's mandate to create a biographical database that includes biographical data, screening data, costs and outcome has yet to be implemented for any of the Minority Health Commission activities. A prioritized list of health priorities was distributed in July 2004.

RESPONSES TO EVALUATION RECOMMENDATIONS IN THE 2004 REPORT

During the past year, the AMHC has taken the following actions relevant to the recommendations made in the FY 2004 evaluation report.

Recommendation: Finalize the development of the prioritized list of health needs for minority populations, drawing upon available information from past research, best practices, and lessons learned from other communities working to reach similar goals.

Program response: A prioritized list was provided shortly after 2004 evaluation report was reviewed for publication. The list, which is presented in Table 7.1, was approved by the AMHC and was derived from analyses of Arkansas Department of Health data by Dr. Nash and Ochoa from the College of Public Health. The Executive Director emphasized the large number of health disparities for African-Americans, only some of which the AMHC will be able to address with current funding levels. Plans are underway to conduct ongoing needs assessment activities to help plan new interventions and initiatives by the AMHC (see Goals section). It should be noted that this list does not address the health needs of other minority populations in the state, for example, Hispanics. The Medical Director for the Hypertension program reported that current data sources, such as the Behavioral Risk Factor Surveillance System (BRFSS) may be unreliable for self-reported hypertension among Hispanics. A Hispanic BRFSS survey in the state of Arkansas is being planned by the Arkansas Department of Health.

Recommendation: Improve the staff skills and capacity to carry out program activities funded by the Tobacco Settlement Funds, and to provide more oversight of contractors performing duties related to Act funding.

Program response: The program director reported that current limits on staffing as specified by state law restricts the number and salary level of its employees. The AMHC epidemiologist is currently attending the COPH part-time to earn a certificate in public health. In the past year, the AMHC contracted with Dr. Namvar Zoohori, MD, MPH, PhD, employed with the Arkansas Department of Health. He is a nutritional epidemiologist and is contracted with

AMHC for 25 percent of his time from July 2004 to June 2005. Dr. Zoohori was hired to assist with design, planning, data collection, analyses, and evaluation of AMHC initiatives. The contracted amount is $25,000 over a one-year period. The AMHC also established new contract relationships in FY 2005 (November 2004) with Media Concepts of Little Rock to help implement marketing and advertising.

The AMHC has written performance standards and goals to oversee the contract with the CHCs for the Hypertension program (discussed in more detail below). The AMHC is working on setting up a similar document for the Eating and Moving for Life program.

Table 7.1 Arkansas Racial Health Disparity, Comparing Rates for African Americans and Whites

Health Problem	Percentage Difference for African Americans Compared to Whites
Homicide	+490
HIV/AIDS	+242
Asthma	+194
Diabetes	+152
Prostate Cancer	+143
Cervical Cancer	+136
Infant Mortality	+63
Colorectal Cancer	+46
Stroke	+45
Breast Cancer	+43
All Cause Mortality	+31
Heart Disease	+25
Ischemic Heart Disease	+21
All Accidents	+19
Motor Vehicle Accidents	+2
Lung Cancer	+1

Source: Arkansas Racial & Ethnic Health Disparity Study

Recommendation: The AMHC should establish an effective financial accounting system and it should use that system to track actual expenditures, consistency of spending on each of the contracts relative to the contract terms, and how much of the Tobacco Settlement funding was returned.

Program response: The financial management staff person was trained in using Quickbooks software to track spending. However, the AMHC is continuing to use Excel for its financial management needs. As described in the Spending Analyses section below, the AMHC receives monthly reports of expenditures from the State Department of Finance after they are processed. The AMHC staff reviews and verifies the payments and enters the information into Excel.

We found that the staff person was able to provide Excel spreadsheets with monthly contract expenditures during our data collection process this year, but the agency did not seem to be tracking the contract expenditures for its program management purposes. More attention to

costs spent on program activities is needed. Detail on this point is presented in Table 7.9 in the spending analysis.

Recommendation: Increase resources dedicated to monitoring the performance of programs and assessing the effects of the programs on desired outcomes.

Program response: In January 2005, the AMHC developed a new memorandum of agreement with the Community Health Centers of Arkansas, which states that the CHCs that are sub-contracted by the CHCA to implement the Hypertension initiative will be required to adhere to a set of specific written performance standards, goals, and guidelines. These performance standards and guidelines specify in writing that each of the CHCs is expected to screen at least 100 individuals per month through at least five screening events. The screening sites are also being monitored, and the AMHC is setting a goal of having the CHCs have at least one new screening site per month. Performance standards and goals are also specified for the referral process.

A goal was stated that at least 65 percent of persons referred to the CHC for further evaluation of blood pressure will be seen at a CHC. This is not a performance standard, but a goal, based on reports that the maximum percent of completed referrals in a four-year research program in a rural community, that included extensive involvement of community health advisors in promoting follow-up, was 65 percent. The AMHC has established performance-based funding, such that CHCs who are not performing at least at an average of 80 percent of the screening guidelines at 6 months will receive a warning. The CHC will be expected to submit an improvement plan within 30 days of receiving a warning. If the CHC does not perform minimum requirements with little prospect for future improvement, the contract will be subject to termination.

The AMHC reported that they are working on a similar set of performance standards and goals for the Eating and Moving for Life (EMFL) program. Performance standards are expected to be set by Spring 2006.

The AMHC is no longer contracting with two external firms, Collaborative Strategies and Advantage Communications for the media activities and grant writing. Media Concepts of Little Rock was hired in November 2004 to assist in advertising and help market the Hypertension Initiative, Eating and Moving for Life program, provide events management for a HIV/AIDS awareness event in February 2005, and the "Southern Ain't Fried Sundays" project initiated in March 2005.

FIVE-YEAR AND SHORT-TERM GOALS

The AMHC has identified four goals with short-term and long-term objectives:

1. Continue needs assessment activities to help inform health needs and policy recommendations for minority populations in Arkansas.
    a. Perform costs analyses for a comprehensive statewide health telephone survey by Fall 2005; then identify stakeholders and potential funding sources by Winter 2005/2006 and submit application for funding by the end of 2005.
    b. Conduct and analyze statewide comprehensive health telephone survey of Arkansans by Fall 2009 with over sampling of minority subpopulations.

In Spring 2004, the AMHC Hypertension Program Medical Director spent approximately two months developing a proposal for a $600,000 grant for Community Partnerships to Decrease Stroke, sponsored by the federal Office of Minority Health. The proposal was for establishment of extensive community partnerships for a comprehensive cardiovascular preventive health program. Although well reviewed, this proposal did not receive funding. However, this extensive planning process led to further development for the Hypertension Program, including developing an online listing of prospective blood pressure screening activities in Chicot, Lee, and Crittenden counties, working with the CHC in Chicot county to include hypertension-related quality indicators in its routine data collection for the Chronic Care Model, and development of an examination survey in the city of Marianna in Lee County.

In addition, the Hypertension Program Medical Director developed a proposal for analyses of hypertension data in the BRFSS over an 11 year period, in collaboration with the Arkansas Department of Health. These efforts culminated in the publication of a Fact Sheet on Hypertension in Arkansas in January 2005 that is being disseminated to policy makers in the state.

2. Increase awareness and education activities to reach Hispanic populations by including Spanish subtitles to all MH Today TV shows by Spring 2007 and developing a cookbook, collaterals for Hispanic population by 2008.

The MH Today TV show has been airing since 2003. AMHC staff are working to have the programs subtitled into Spanish. In 2004 and early 2005, a cookbook and set of collaterals (bible bookmark, magnets) were developed for a campaign called, “Southern Ain’t Fried Sundays”. This campaign was implemented mainly in African-American churches during March of 2005 and is being continued thru June 2005. The AMHC staff are working to produce materials that would be appropriate for the same kind of activity in Hispanic communities.

3. Expand current intervention activities
    a. Increase enrollment in the CHC-based Hypertension Treatment Initiative by 5 percent annually within each participating county, based on the enrollment numbers at the end of fiscal year 2004.
    b. Expand Eating and Moving for Life Initiative to 10 counties by 2010
4. Increase external funding by:
    a. 5 percent in Spring 2006
    b. 10 percent annually in following years (Spring 2007-2010)

In summary, the AMHC have set goals that are consistent with their current activities. Although a needs assessment was completed a few years after funding was received through literature review of existing data sources and a targeted focus group study, the agency perceives that a more comprehensive health survey for minority Arkansans is needed. This project is intended to be a multi-year activity, although no external funding source for it has yet been identified. Results from this survey are not expected to be available until 2010, so the AMHC will need to rely on existing data sources for an assessment of the needs of Arkansan minorities until 2010. The AMHC initiated its awareness and education activities by focusing on African Americans, the most prevalent racial/ethnic minority in the state. Planning is underway to translate these efforts to serve Hispanics, the second largest racial/ethnic minority in the state.

The enrollment rates for the two MHI health intervention programs (i.e., the hypertension initiative and Eating and Moving for Life) over the past year have been low. The AMHC has set standards to improve enrollment in hypertension. More work is needed on improving performance of the Eating and Moving for Life program.

To date, the AMHC has leveraged its Tobacco Settlement funding with an additional $13,000 received from the Cardiovascular Health Program of the Arkansas Department of Health to support blood pressure measurement training activities with health professionals and lay volunteers. Additional external funds could be gained to support their activities. By setting a goal to increase external funds, more attention will be placed on increasing support for the AMHC activities.

PERFORMANCE ON PROCESS INDICATORS THROUGH DECEMBER 2004

Five indicators were selected to represent the overall progress of the AMHC in meeting the goals of the initiated Act. Three represented program progress: (1) increase awareness of hypertension, strokes, and other disorders disproportionately critical to minorities, (2) Provide screening or access to screening for hypertension, strokes, and other disorders for minorities, and (3) Develop intervention strategies to decrease hypertension, strokes and other disorders noted above, as well as associated complications. Two indicators were one-time outcomes: (1) develop a prioritized list of health problems for minority populations, and (2) establish and maintain a database for individuals who participate in the MHI interventions.

Increase awareness of hypertension, strokes, and other disorders disproportionately critical to minorities by utilizing different approaches that include but are not limited to the following: advertisements, distribution of educational materials and providing medications for high risk minority populations

Indicator: Number of events to increase awareness, by type of effort

The AMHC's media efforts continue to include a television program, advertising for television, radio, and print, a website, health education and AMHC informational handouts, and AMHC marketing materials. As displayed in Table 7.2, many of the media communication events have increased over the past year. For example, the MH Today television show aired more frequently in 2004 (62 airings) than 2003 (32 airings). Television advertisements increased twenty-fold (i.e., from 373 in 2003 to 7,730 in 2004) while newspaper advertisements doubled (i.e., 24 in 2003 to 48 in 2004). Visitors to the AMHC website more than doubled, moving from about 3.7 visitors a day in 2003 to approximately 7.4 visitors a day in 2004. Collaterals distributed increased by 45 percent. However a couple of the awareness activities declined in the past year. Radio advertisements decreased by almost half in 2004 (i.e., 1,776) as compared to the previous year (i.e., 3,440). Calls to the AMHC also decreased by a little over half, averaging about one call every four days in 2004.

Table 7.2 Media Communication Events for the Minority Health Initiative

	Number of Events Carried Out						
	Jul-Dec 2001	Jan-Jun 2002	Jul-Dec 2002	Jan-Jun 2003	Jul-Dec 2003	Jan-Jun 2004	July-Dec 2004
a. Mass media placements							
- TV shows (30-min)	0	0	0	6	26	26	36
- TV ads (30-sec units)	0	0	0	0	373	600	7,130
- Radio ads (60-sec units)	0	0	280	1,780	1,660	1,176	600
- Newspaper ads	0	0	16	17	7	18	30
b. Website hits							
- unique # visitors	na	na	na	325	1,038	1,368	1,323
- total # hits	na	na	na	14,305	37,873	57,388	66,053
- average # hits per visitor	na	na	na	44	37	42	50
c. Direct calls to AMHC*	na	na	35	140	71	53	42
d. Materials distributed (collaterals, pamphlets, handouts*	0	110	226	4,668	9,076	11,021	8,864

na Data not available

* Increases in counts result partially from improvements in recordkeeping.

The screening that occurs as part of the Hypertension Initiative also serves as an additional awareness activity. Screening rates for that initiative are listed in Table 7.4. The AMHC Hypertension Program Medical Director has been working on the following awareness activities during 2004:

- Development of Fact Sheet on Hypertension
- Development of specific hypertension related goals and specific aims to be included in the State Plan on Cardiovascular Disease developed by the Arkansas Department of Health's Cardiovascular Health Program.
- Continued participation in the planning group for the State Plan
- Investigating and posting links to helpful patient education sites about hypertension, stroke, cholesterol, and the DASH diet on the AMHC website
- Providing links to helpful patient education sites about hypertension to the UAMS Medical Library, for inclusion in their health resources website
- Development of three continuing education talks on "Hypertension in Arkansas" which were delivered to medical professionals and public health professions during the year.

Provide screening or access to screening for hypertension, strokes, and other disorders disproportionately critical to minorities but will also provide this service to any citizen within the state regardless of racial/ethnic group.

Indicator: Screening rate for minority Arkansans for disorders disproportionately critical to minorities at MHI-sponsored events and recorded in the MHI database

The AMHC has monitored and organized health screens since the current executive director joined the organization. The AMHC's role in these health screening opportunities has evolved over time. Table 7.3 shows the distribution of AMHC's involvement.

Initially, the AMHC attended health fairs organized by other organizations, at which it provided health information and monitored health screens provided by those organizations. In 2002, the AMHC participated in 11 of these health fairs. The AMHC continues to participate in health fairs organized by other entities, with its participation increasing to 22 health fairs in 2003 and to 25 in 2004. In addition, the AMHC often is contacted to assist in the planning of these events.

In 2003, the AMHC established its own health fairs, called Public Forums. In addition to providing health screenings, the Public Forums are designed to allow local community members an opportunity to communicate their health needs to the AMHC. In 2003, the AMHC held 3 Public Forums in different areas of the state (Pulaski, Phillips, and Benton counties). In 2004, the AMHC held 3 Public Forums in the Delta region (Crittendon, Lee, and Chicot counties).

The AMHC also organizes additional health fairs in the state where AMHC recruits local health care providers to offer health screenings. The AMHC staff monitor the amount and type of screenings performed. The AMHC organized 11 of those health fairs in 2003 and 7 in 2004.

Most of the health fairs organized or attended by the AMHC are in Little Rock, and that percentage has increased over time. In total, the number of health fairs with some AMHC involvement (either participation or sponsorship) has remained fairly steady in 2004 (35 health fairs and forums) compared to the prior year (36 health fairs and forums).

Table 7.3 Number of Health Screening Opportunities by AMHC Involvement

	Jul-Nov 2001	Jan-Jun 2002	Jul-Dec 2002	Jan-Jun 2003	Jul-Dec 2003	Jan-Jun 2004	Jul-Dec 2004
AMHC Public Health Forums	0	0	0	1	2	1	2
Health fair: AMHC-organized	0	0	0	2	9	5	2
Health fair: AMHC-assisted	0	7	4	11	11	14	11
Total health forums and fairs	0	7	4	14	22	20	15
Percentage of events held in Little Rock	0%	17%	100%	57%	55%	60%	67%

Table 7.4 presents the trends in health screening activities at the health forums and fairs sponsored by the AMHC. The table shows both the numbers of screens by type and date and the screening rates per 1,000 minorities based on Census data (i.e., 486,950 in 2002; 491,755 in 2003; 496,311 in 2004). Table 7.5 presents similar trends in the number and rate of screens for events that were primarily organized by the AMHC.

In these tables, the data are presented by type of screening event organized by rows. Cardiovascular screenings included measurements of blood pressure, cholesterol, or body mass index. Diabetes screens were based on blood glucose checks. Cancer screenings included breast exams, certificates to obtain mammographies, and prostate examinations. Depression screeners were self-reported survey instruments. HIV screens were blood tests. Other types of health-

related activities, such as immunizations, vision checks and flu shots were assessed and presented in the "Other" category.

From program inception through December 2004, the AMHC monitored a little less than 22 health screening events per 1,000 minorities (i.e., approximately 10,676 screening events over a three year period) with about 3 screenings per 1,000 minorities performed as part of the AMHC-organized efforts. Although the number of screenings monitored increased in 2004 (4,527), compared to 2003 (2,948), the number of screening events for which the AMHC was primarily responsible were slightly less than the previous year (1,539 in 2004 as compared to 1,592 in 2003). It is important to note that these are numbers of screenings and not unduplicated counts of people. An individual may have had her blood pressure, cholesterol, and blood glucose levels checked, so the actual number of individuals screened is fewer than the number of screenings. Health screenings that occur as a result of the AMHC program interventions (Hypertension Initiative and Eating and Moving for Life) are discussed in the next section.

Table 7.4 Total Number of Screenings and Screening Rates , by Type of Screening[++]

	Minorities Screened in Each Six-Month Period						
Health Condition	July-Dec 2001	Jan-Jun 2002 +	July-Dec 2002	Jan-Jun 2003	July-Dec 2003	Jan-Jun 2004	July-Dec 2004
Number of screenings							
Cardiovascular*	0	885	425	431	1,404	1,648	1,011
Diabetes	0	435	79	276	482	661	557
Cancer**	0	112	0	119	45	115	180
Depression	0	0	60	40	0	10	0
HIV	0	255	0	82	0	50	90
Other***	0	0	65	69	0	175	30
Screening rate (per 1,000 minorities)							
Cardiovascular*	0	1.8	0.9	0.9	2.9	3.3	2.0
Diabetes	0	0.9	0.2	0.6	1.0	1.3	1.1
Cancer**	0	0.2	0.0	0.2	0.1	0.2	0.4
Depression	0	0.0	0.1	0.1	0.0	0.0	0.0
HIV	0	0.5	0.0	0.2	0.0	0.1	0.2
Other***	0	0.0	0.1	0.1	0.0	0.4	0.1

\+ Rates are high in this period because many MHC screenings were at health fairs sponsored by other organizations; rates dropped in the next period after a major sponsor discontinued its fairs.

++ Values presented in tables are estimates because they may include non-minorities and may represent duplicated counts.

* Cardiovascular includes screenings for blood pressure, cholesterol, and body mass index

** Cancer includes screenings for mammography/breast, and prostate

*** Other includes child ID, flu, vision screenings.

Table 7.5 Estimated Number of Minorities Screened and Screening Rates at AMHC Sponsored Events, by Type of Screening [++]

	Number of Minorities Screened						
	July-Dec 2001	Jan-Jun 2002	July-Dec 2002	Jan-Jun 2003	July-Dec 2003	Jan-Jun 2004	July-Dec 2004
Number of screenings							
Cardiovascular*	0	0	0	115	871	550	421
Diabetes	0	0	0	114	322	221	197
Cancer**	0	0	0	3	45	20	50
Depression	0	0	0	40	0	0	0
HIV	0	0	0	79	0	50	0
Other***	0	0	0	3	0	0	30
Screening rate (per 1,000)							
Cardiovascular*	0.0	0.0	0.0	0.2	1.8	1.1	0.8
Diabetes	0.0	0.0	0.0	0.2	0.7	0.4	0.4
Cancer**	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Depression	0.0	0.0	0.0	0.1	0.0	0.0	0.0
HIV	0.0	0.0	0.0	0.2	0.0	0.1	0.0
Other***	0.0	0.0	0.0	0.0	0.0	0.0	0.1

\+ Rates are high in this period because many MHC screenings were at health fairs sponsored by other organizations; rates dropped in the next period after a major sponsor discontinued its fairs.

++ Values presented in tables are estimates because they may include non-minorities and may represent duplicated counts.

* Cardiovascular includes screenings for blood pressure, cholesterol, and body mass index

** Cancer includes screenings for mammography/breast, and prostate

*** Other includes child ID, flu, vision screenings.

Develop intervention strategies to decrease hypertension, strokes and other disorders noted above, as well as associated complications, including: educational programs, modification of risk factors by smoking cessation programs, weight loss, promoting healthy lifestyles, and treatment of hypertension with cost-effective, well-tolerated medications, as well as case management for patients in these programs

Indicator: Treatment program registration rates by minority Arkansans for disorders disproportionately critical to minorities at MHI-sponsored treatment programs

To date, the AMHC has commissioned two interventions: the Hypertension Initiative and the Eating and Moving for Life program. As shown in Table 7.6, health screenings were performed as part of both these programs. For the Hypertension Initiative, contracted staff conducted the screenings to increase awareness of hypertension, educate about hypertension, and determine intervention program eligibility. Individuals are offered an opportunity to come to the CHC for further evaluation of blood pressure, and if eligible based on financial criteria, to enroll in the treatment program.

The Hypertension Program is operated by the Community Health Centers of Arkansas, under a Memorandum of Agreement with AMHC. The CHCA subcontracts with the community health centers located in Lee, Chicot, and Crittenden counties. For the hypertension program,

screening rates increased by 74 percent in FY 2004 (3,956) over rates in FY 2003 (2,273). The FY 2004 screening rates are above the standard 100 screenings per month, per site (i.e., 3,600 for the year). On a six-month basis, screening rates peaked at 2,342 in the period of January through June 2004, followed by a decline to 1,614 in the subsequent period. Enrollment rates dropped considerably in 2004 (by 45 percent), with only about 4 percent of those screened being enrolled in the program.

Table 7.6 also shows the rates enrolled in the Hypertension program per 1,000 Arkansan minorities. Rates were about 0.76 per 1,000 in 2003 and decreased to 0.33 per 1,000 in 2004. Given reported estimates of the target population for each of the participating counties (i.e., number of adults who have uncontrolled hypertension; Lee county, n = 3,296; Chicot, n = 2,193; Crittendon, n = 10,592), enrollment rates are 22 per 1,000 in 2003 and 10 per 1,000 in 2004.

In 2004, the Eating and Moving for Life program continued to operate in Mississippi and Sevier counties, while during the second half of the year, the program in Desha was discontinued and a new program was started in Lee county. In 2004, screening rates increased by 45 percent and enrollment rates rose by 26 percent compared to 2003.

Table 7.6 Number Screened and Enrollment Rates for the AMHC Hypertension and Eating and Moving Programs

	Jan-Jun 2003		Jul-Dec 2003		Jan-Jun 2004		Jul-Dec 2004	
	Number	Rate *	Number	Rate *	Number	Rate *	Number	Rate *
Hypertension								
Screenings	660	1.34	1,613	3.28	2,342	4.72	1,614	3.25
Enrollments	94	0.19	270	0.55	102	0.21	59	0.12
Eating and Moving								
Screenings	58	0.12	118	0.24	126	0.25	192	0.39
Enrollments	58	0.12	108	0.22	115	0.23	122	0.22

* Screening and registration rates are the numbers screened or enrolled per 1,000 minorities in the state.

Indicator: Develop and maintain a database that will include biographical data, screening data, costs, and outcome

As mentioned above, the Act specifies that the AMHC is to maintain a database that contains biographical data, screening data, costs, and outcomes. Per this mandate, the AMHC plans to maintain a database of individuals who participate in their interventions (i.e., Eating and Moving For Life and Hypertension Initiative). As reported in the 2004 evaluation report, work in this area has not yet been completed, and future improvements remain to be made to reach this goal. The AMHC tracks the number and ethnicity of persons screened at Health Fairs and Public Forums that they participate in or organize, but individual biographical data is not being kept.

For the Eating and Moving initiative, an excel spreadsheet with date of birth, gender, race/ethnicity, blood pressure, glucose, cholesterol, height, weight, and exercise regime at program entry has been developed and implemented at all three sites. Data from 2004 that was kept in the excel spreadsheets was not accurate for screening and enrollment rates. Information on the other characteristics was not reviewed due to the problem with the screening and enrollment rates. Participation and outcomes could not be monitored.

For the Hypertension initiative, the Hypertension Program medical director reported that she has access to a database that tracks biographical, screening, and outcomes data, but cost data have yet to be incorporated. A web-based database system is planned to be piloted this summer after a year of planning and testing by the UAMS information technology department.

Indicator: Prioritize the list of health problems and planned intervention for minority population and increase the number of Arkansans screened and treated for tobacco related illnesses

As mentioned under the first recommendation in this chapter, the AMHC submitted a list of health priorities in July 2004, which is displayed in Table 7.1. As mentioned in the Goals section above, plans are underway to conduct a comprehensive statewide survey so that the health needs can be more accurately identified.

ANALYSIS OF SPENDING TRENDS

Act 1571 of 2001 and S.B. 285 of 2003 appropriated funds for the Minority Health Commission for the first two biennium periods of the Tobacco Settlement Fund Allocation. Table 7.7 details the appropriations by fiscal year. The AMHC financial staff reported that the AMHC received slightly less than the appropriated amount in FY2003 and more than the appropriated amounts in FY2003 and FY2004.[6]

Table 7.7 Tobacco Settlement Funds Appropriated to the Minority Health Commission, by Fiscal Year

	First Biennium		Second Biennium	
Item	2002	2003	2004	2005
(1) Regular salaries	$27,855	$132,482	$139,369	$143,132
(2) Personal service matching (PSM)	10,844	38,203	41,482	42,149
(3) Maintenance & operations (M&O)				
(A) Operations	200,000	425,000	425,000	425,000
(B) Travel	2,500	3,000	3,000	3,000
(C) Professional fees	358,077	739,508	739,508	739,508
(D) Capacity outlay	5,000	26,000	0	0
(E) Data processing	0	0	0	0
(4) Drugs and medicine	304,224	997,907	663,646	663,646
Annual Total	$908,500	$2,362,100	$2,012,005	$2,016,435
Biennium Total	$3,270,600		$4,028,440	

The following analysis describes the expenditures of the AMHC from January 2001 until December 2004. Because December 2004 is the middle of the second year of the second biennium, no year totals for FY2005 are presented, and it is not possible to fully detail expenditures in the second biennium.

Table 7.8 presents the total annual Tobacco Settlement funds spent by the AMHC during the two-biennium period, through the first half of FY 2005. The AMHC has been unable to

[6] In FY2002, the MHC reports receiving $801,187. In FY2003, it reported receiving $2,575,790. In FY2004, it reported receiving $2,129,100.

spend a large portion of the money it was appropriated. Although spending increased significantly in FY 2004, due primarily to a more than doubling of expenditures on professional fees, the program under-spent by 12 percent in FY 2004 relative to the appropriation. Further, the expenditures for the first half of FY2005 indicate that this trend will continue unless it spending accelerates substantially in January through June 2005.

Table 7.8 Tobacco Settlement Funds Spent by the Minority Health Commission, by Fiscal Year

Item	2002	2003	2004	2005*
(1) Regular salaries	$17,175	$107,958	$128,441	$66,109
(2) PSM	13,185	35,028	43,504	25,959
(3) M&O				
(A) Operations	68,366	191,419	279,304	195,198
(B) Travel	9,978	13,256	16,236	2,994
(C) Professional fees	180,070	641,555	1,302,009	343,297
(D) Capacity outlay	848	9,038	0	
(E) Data processing	0	0	0	
(4) Drugs and medicine**	0	0	0	0
Annual Total	$289,621	$998,255	$1,772,572	$663,557

* Amounts spent through December 31, 2004.

** The AMHC is not breaking drugs and medicine out as a separate line item in its accounting system. Instead, funds for drugs and medicine appear under the professional fees and services line item

Figure 7.1 highlights the spending of the AMHC for two categories: personal salaries and fringe and maintenance and operations. The AMHC had a very long start-up period. Spending for regular staff to manage the program was erratic until the end of FY2003. Spending on maintenance and operations grew in later quarters, but spending levels varied substantially from quarter to quarter.

The large swings in spending from one quarter to another are largely the result of changes in operating expenses and professional fees related to specific programs. The substantial decrease in operating expenses from Q4-04 to Q1-05 is due to the expiration of professional contracts with Collaborative Strategies and Advantage Communication at the end of the fiscal year. The large increase in spending on operations from Q1-05 to Q2-05 can be attributed to an increase in expenses related to the AIDS Awareness program and the Eating and Moving program.

Spending on Professional Fees represented from 43 percent to 80 percent of total spending in the last four quarters. Table 7.9 documents spending for each professional contract for FY2004 and the first half of FY2005. The difference between the Professional Fees in Table 7.8 and the contract total is non-contract spending. Examples of these expenses are web maintenance, marketing services and office remodeling. This was the spending information we were unable to obtain from the AMHC for our 2004 evaluation report.

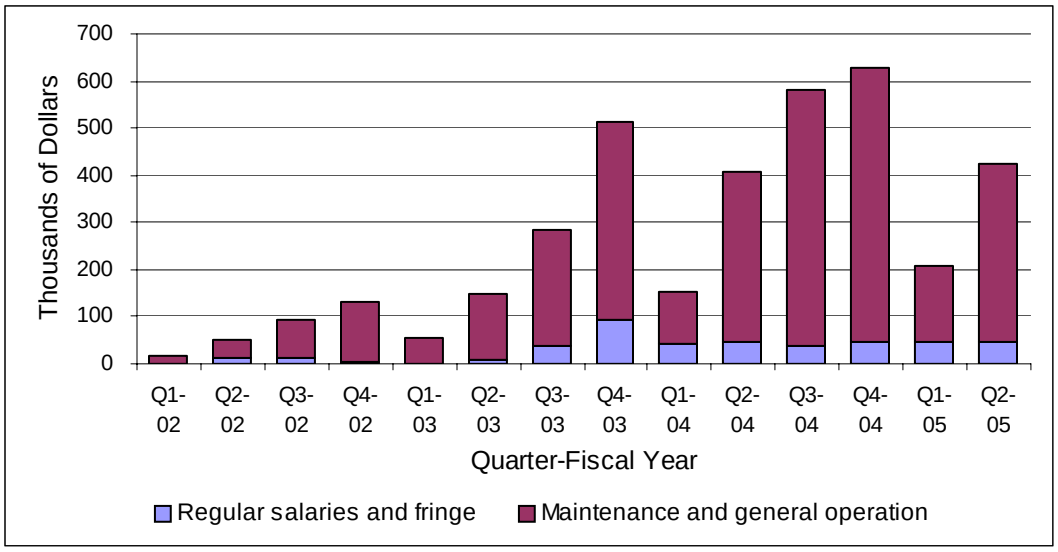

Figure 7.1 AMHC Tobacco Settlement Fund Spending, by Quarter of Fiscal Years

Table 7.9 Minority Health Commission Spending on Professional Contracts, By Fiscal Year

Contract	Contract Description	FY2004 Contract	FY2004 Spending	FY2005 Contract	FY2005 Spending*
Collaborative Strategies	Grant Writer and Prof. Development	$50,000	$58,820	$0	$0
UAMS College of Public Health	Health Disparities Study	104,187	149,932	104,187	26,017
Community Health Center of AR	Implementing of Hypertension Program	663,000	563,770	530,400	156,326
UAMS College of Medicine	Medical Director-Hypertension Program	192,500	128,935	192,500	45,501
Univ of AR Coop. Ext. Service	Implementing Eating and Moving Program	156,453	105,392	156,453	39,113
Advantage Communications	Media and Marketing Facilitator	141,000	144,998	0	0
Arkansas Dept. of Health	Epidemiologic and Statistical Service	-	-	32,380	0
UAMS IT Dept.	Hypertension Database	-	-	12,000	0
	Total amount	$1,307,140	$1,151,347	$1,027,920	$266,957

*amounts spent through Dec. 31, 2004

Expenditures for drugs and medicine, which is a separate line item in the appropriations, are included in the Professional Fees line item. Specifically, the amounts are a component of the AMHC's payments to the Community Health Centers for implementation of the Hypertension program. In the first RAND evaluation, the AMHC was not able to provide spending totals for

drugs and medicine. The CHCA provided spending information on medication costs for FY 2004 ($33,654.05) and FY 2005 ($23,066.75) in August 2005.

Approximately 45 percent of the AMHC's total spending in FY2004 was allocated to the Hypertension and Eating and Moving programs. An analysis of spending for these two programs is presented in Table 7.10. The key figures presented are the average costs per enrollee for each of the two programs.

The costs for the Hypertension program are extraordinarily high and cannot be justified on the basis of the intensity of services required for hypertension patients. We estimate that the Hypertension program had a cost of $1,862 per enrollee in FY 2004, which increased to $3,421 per case in the first half of FY 2005. This large cost increase was due to the large decline in number of program enrollees, which was not accompanied by cost reductions of a similar scale.

Table 7.10 Minority Health Commission Spending on the Hypertension and Eating-and-Moving Programs, By Fiscal Year

	FY2004	FY2005*
Hypertension Program		
Number of Individuals Screened	3,956	1,614
Number of Individuals Enrolled	372	59
Percentage of Screened Enrolled in Program	9%	4%
Costs:		
Community Health Centers	$563,770	$156,326
Medical Director	128,935	45,501
Total Hypertension costs	$692,705	$201,827
Estimated cost per enrollee**	$1,862	$3,421
Eating and Moving Program		
Number of Individuals Screened	244	192
Number of Individuals Enrolled	223	122
Percentage of Screened Enrolled in Program	91%	64%
Costs:		
UA Cooperative Extension Service	$105,392	$26,017
Advertising	5,500	2,000
Total Eating and Moving costs	$110,892	$28,017
Estimated cost per enrollee**	$497	$230

*Represents 1st half of FY 2005 (July-December 2004)
**Represents Number of Enrollees divided by total costs

These Hypertension Initiative costs compare to an estimate by a recent study that the average yearly costs for hypertension medication in 2001 are $363 per hypertension patient (Fischer and Avorn, 2004). Medication costs are the dominant cost for treating hypertension patients, although the total direct cost would be increased slightly for the costs of clinic visits. Given information provided in August 2005 on medication costs, the CHCs report spending on average $89on medication in FY 2004 for those enrolled in that same fiscal year and $391 in FY 2005 for those enrolled in the same fiscal year. This estimate does not take into account ongoing treatment costs beyond the fiscal year that a client is enrolled. Currently the policy is that enrollees can receive payment for medications for up to one year. In addition, overhead costs for

program administration and community outreach would be included in the average cost per patient. Indeed, both of these costs are included in the total CHC costs for the Hypertension program. These administrative costs currently are being spread over an extremely small enrollee base, and it is not likely that such costs could account for such a large percentage of per enrollee costs that are as high as $1,862 or $3,421.

For the 2004 evaluation report, we were unable to obtain the necessary financial information from the MHC to scrutinize contracts and program spending. Since that time, the accounting system has been improved and complete information was assembled and provided. Currently, the MHC receives monthly reports of expenditures from the State Department of Finance after they are processed. The MHC staff reviews and verifies the payments and enters the information into Excel. Staff was able to provide Excel spreadsheets with monthly contract expenditures, but the agency did not seem to be tracking the contract expenditures for its own program management purposes.

RECOMMENDATIONS

The AMHC has improved in its implementation of a number of its activities, but one of the most important components, the Hypertension Initiative, still needs increased attention. Many of the recommendations made in the last report are still relevant.

- **Hypertension Initiative in need of increased oversight and program improvement**

It was noted in our last report that the new Hypertension Program Medical Director instituted quality control measures (i.e., training in blood pressure measurement) that has helped improve the program. However, the clinics are not being held accountable in a timely fashion for many of their performance problems. During our 2004 site visit, the Medical Director reported estimates of the target population for each of the participating counties (i.e., number of adults who have uncontrolled hypertension; Lee county, n = 3,296; Chicot, n = 2,193; Crittendon, n = 10,592). The AMHC should consider using these estimates to help monitor performance at each of the clinics. For example, the AMHC should consider tying payment to the clinics for reaching a certain percentage of the target population. Another incentive that the AMHC should consider using with the clinics is a payment structure such that clinics receive funds for each resident that they enroll. The current payment structure of a lump sum amount is not appropriate, especially given the low enrollment rates.

The current level of spending per enrollee in the Hypertension Initiative is alarming As cited in our previous report, a recent study on the costs associated with hypertension medication estimated the average yearly cost per hypertension client to be $363 in 2001 (Fischer & Avorn, 2004). The AMHC costs were more than $1,800 per enrolled client in FY 2004 and more than $3,400 in the first half of FY 2005, an increase of 86 percent. Given the low spending on medication that we could detect ($56,720.80 over fiscal years 2004-05), this cost is primarily for personnel. Considering that the AMHC was appropriated approximately $1.2 million over a two year period for hypertension drugs and medications, and rounding up the estimated costs to $400 per individual, the CHCs should be able to treat approximately 1,500 people, whereas it has been treating only a few hundred people per year. It is also not clear how many visits the current clients are receiving for this amount of funds due to the lack of a proper tracking system in place to monitor visits.

Although the AMHC has issued a new guideline for performance in January 2005, these guidelines offer too much time to pass before consequences ensue. For example, screening rates have to be less than 80 percent over a six month period before a warning is issued. Then the clinic is offered an opportunity to submit an improvement plan. Over a year may pass before any changes to the contract are made. The AMHC needs to consider a much shorter time frame to end payment to clinics that are not performing as expected.

- **Strengthen strategies to reach target populations (i.e., minority Arkansans)**

In 2004, AMHC shifted its efforts to Lee county. Both the Hypertension and Eating and Moving interventions are now offered there, a public health forum was held there, long-term needs assessment activities are in the planning stages with pilot data planned to be collected in Marianna. The Marianna initiative is based on planning efforts from the previous stroke prevention application. The plan is for it to provide indepth information about hypertension in a community, and allow development and testing of hypertension related interventions (for hypertension prevention and hypertension control), which then may be generalizable to other locations in Arkansas. Staff report that the decision to focus on Lee county is strategic; that is, it was important to the AMHC that screening efforts be associated with an effective referral mechanism, so this initiative is in a location where services for medically indigent hypertension patients identified by our survey could be guaranteed.

The 2003 census data indicate, however, that a small proportion of the African-American population of Arkansas is located in Lee County (6,844 which is 1.6 percent of the cumulative population of non-Hispanic Blacks, based on information provided at http://www.census.gov/popest/counties/asrh/CC-EST2003-RACE6.html). Several other counties have significantly higher proportions of African-Americans with less intervention resources devoted to them (e.g., Pulaski (28.5 percent); Jefferson (9.8 percent); Crittendon (5.9 percent); Mississippi (3.8 percent); Phillips (3.5 percent); Union (3.4 percent); Saint Francis (3.3 percent); Ouachita (2.5 percent); Miller (2.4 percent); Columbia (2.1 percent)). The AMHC reports that although other counties have more minorities, they also have more available health resources. Lee County and many of the Delta counties are some of the poorest counties in the state, and are significantly medically underserved.

Few telephone calls are being made directly to the AMHC, although hits to their website have increased. The majority of the calls were logged as relating to medication assistance or the MH Today television show. It is expected that increasing awareness of their organization may lead to more inquiries for information than was seen over the past year. Staff may want to consider what part of the population their awareness efforts are reaching and if there are ways to increase health education dissemination. In 2005, the AMHC reported efforts to increase health education dissemination by emphasizing provision of the educational materials during the Hypertension Program Outreach Screenings. This is being done because the majority of persons screened will say that they have a primary care provider, so they will only get AMHC-provided health information at the time of the screening.

The number of health screens as a result of AMHC planned events has not increased over time and remains low (i.e., around 2 per 1,000 minorities in 2004). Given that the AMHC has little opportunity to change its staffing, the AMHC may think of ways to increase these health screening efforts by partnering with health care professionals that are certified to conduct such activities, beyond the community health clinics participating in the Hypertension initiative.

Becoming aware of the other health care treatment opportunities available in the community (e.g. through local health centers, and including the AHECs and Centers on Aging) and providing information on prescription assistance, Medicaid, and other funding options, the screening events might assist those positive screened for a disorder to seek needed treatment, a major concern expressed by the AMHC staff. The AMHC reports that it plans to continue aggressive efforts at partnering with other agencies to improve health for all Arkansans.

It should be noted that the prioritized list and future needs assessment activities have not included other minority populations in the state, for example, Hispanics. Staff are increasing efforts to reach minority populations by getting the MH Today show into Spanish, planning to convert their recent cooking demonstration project into Spanish, and offering the Eating and Moving For Life program in Sevier county, where many Hispanics in the state live. However, there has not been a systematic assessment of the needs of this population by the AMHC.

- **The AMHC should establish an effective financial accounting system and it should use that system to track actual expenditures, consistency of spending on each of the contracts relative to the contract terms, and how much of the Tobacco Settlement funding was returned. (*Recommendation from 2004 Report*)**

The AMHC has made improvements in conveying their spending information to RAND. However it is not clear that the program is monitoring the contract expenditures for its own purposes, as evidenced by the extremely high costs per enrollee for the Hypertension program. As stated above, more contractual incentives and accountability measures need to be used (i.e., tying payment to performance) such that the AMHC obtains the performance from its contracted staff. These methods are well-documented in the public health literature (Honoré et al., 2004).

- **Increase resources dedicated to monitoring the performance of programs and assessing the effects of the programs on desired outcomes (*Recommendation from 2004 Report)***

As stated in our last report, we still recommend an emphasis on monitoring of program progress by qualified staff to assess both operational and financial performance. Currently, many of the contracts executed by AMHC lack quality improvement and monitoring requirements. Increased oversight and program evaluation is needed to monitor the quality of the interventions being implemented. For example, in our last evaluation report, we were able to report on self-reported behavioral changes from pre- and post-participation in the Eating and Moving program (e.g., changes in the number of fruits, vegetables, whole grains, dairy products consumed). It is not clear whether these type of program evaluations are being done and monitored to assess program quality.

The delay in developing the database has lost the AMHC a needed resource that could be used in monitoring program performance. It was reported by the AMHC that with the business associate agreements that were signed in early 2005, the HIPAA restrictions have been met to allow the AMHC to probe the CHC databases for program evaluation purposes. The AMHC is making preparations for storing that data in a central database, to be maintained by the UAMS Information Technology department on one of their servers.

Chapter 8
Arkansas Biosciences Institute

UPDATE ON PROGRAM ACTIVITIES

From July 2003 to December 2004, ABI has continued to leverage ABI funding to attract extramural funding, work collaboratively among the five different institutions, bring in new faculty, and disseminate their research findings to the community. During the 2003-2004 fiscal year, ABI institutions brought in more than $2 for every ABI dollar received. Extramural funding increased from approximately $21 million across the five institutions to approximately $29 million. In addition, the number of extramural projects on which the five different institutions collaborated increased from 2003 to 2004. During the 2003-2004 fiscal year, ABI began to report the number of publications that involved researchers across the five different institutions. They had 50 collaborative publications for the 2003-2004 fiscal year. During this time, they also hired 7 new faculty, covering all five research areas. Publications increased from 129 publications for the 2002-2003 fiscal year to 204 publications for the 2003-2004 fiscal year, seminars and lectures nearly tripled (from 24 to 62), and ABI continued to have media contact and press releases.

During this time, ABI had several meetings of its Board of Directors. Actions taken by the Board included receipt and discussion of updates provided from the five institutions and approval of a motion to provide support for an upcoming writers workshop. The Board also considered and developed a response to recommendations from the Science and Industry Committees. In addition, the Science and Industry Advisory Committees met with the ABI Board in September and discussed several topics, including the ABI Fall Research Symposium, the RAND Report, core facilities, intellectual property, and business development. ABI held their Fall Research Symposium in October with approximately 120 people in attendance. In November, ABI helped sponsor a writer's convention and workshop called the Council for the Advancement of Science Writing, which was held at UAF. Freelance writers and other journalists came to UAF to hear about research that is taking place within Arkansas. The writers will use this information for future stories to publicize the work that is occurring within the state.

RESPONSES TO EVALUATION RECOMMENDATIONS IN THE 2004 REPORT

During the past year, ABI has taken the following actions relevant to the recommendations made in the FY 2004 evaluation report.

Recommendation: ABI should work to better publicize the ABI initiatives to the state of Arkansas and nationally.

Program response: ABI made plans in 2003 to try to publicize their goals over the 2004 fiscal year. The leadership is considering placement of a variety of radio spots to provide statewide information. The ABI also sponsored the Council for the Advancement of Science Writing in which freelance writers and other journalists are invited to come to a workshop in order to hear about research taking place within Arkansas. This information can then be used in future stories to describe to the public on-going biomedical and scientific research in Arkansas. Although this workshop did not showcase any ABI research projects, holding the workshop does provide ABI additional visibility in the community.

Recommendation: ABI should begin to collaborate with the surrounding community.

Program response: In the beginning of 2005, ABI wanted to put together a seminar for the business community that would focus on the research taking place in Arkansas and the need for venture capital. They are still working on putting together this seminar. ASU plans to involve the community in their research efforts, including going to schools and training teachers and students about research and science. ABI staff report that this has been well received locally. ASU has also continued to work with surrounding businesses.

Recommendation: Strategies should be identified to increase the collaborative process among the five institutions.

Program response: ABI has not explicitly set up any type of incentive program for encouraging collaborative projects across the five institutions at this point in time. However, their collaborations have increased, which is shown by the increased percentage of research projects that are collaborative and by the large number of collaborative publications (50 out of 204 were collaborative). In addition, they are planning to hold some mini-conferences focused on a specific area of research so that investigators from the five different universities who work in this area can meet one another and learn what others are doing.

Recommendation: ABI should begin to examine outcomes of their program.

Program response: ABI had previously discussed the possibility of tracking students to get an understanding of where students go after they have received training due to ABI funding. There is not an easy way to do this for all students. During the 2005 RAND site visit, discussion focused on ways to track higher level students. Because investigators who receive ABI funding keep a record of the graduate level students that were funded with tobacco money, ABI decided that tracking higher level students would be feasible and would provide them with an opportunity to examine how the training affects the state and surrounding community. ABI will begin to track graduate students, postdoctoral fellows, and fellows (at Children's Hospital) for the 2005 fiscal year.

FIVE-YEAR AND SHORT-TERM GOALS

ABI has identified three long-term goals:

1. Maintain current level of total grant funding (as of FY2005).
2. Increase applied research that will have community impacts and increase collaboration with local businesses.
3. Bring ABI scientific and research capabilities to pilot or community-based programs.

ABI plans to reach these longer-term goals by doing several things in the short term. First, they plan to continue to work with local businesses and the surrounding community on different projects, such as "biotech in a box" for the schools, which trains students and teachers in science related activities. They also plan to begin to apply for more business related grants in which they will collaborate with local businesses. They plan to continue to write proposals and obtain extramural funding, with the knowledge that they cannot realistically continue to increase funding every year, but that maintaining their current levels of funding is a practical goal. They are also going to begin to document the efforts that they make in the surrounding community,

such as working with students and local business and developing clinically relevant pilot programs that may impact adult and child health.

We note that the second and third goals are qualitative statements, reflecting current uncertainty regarding how much of the ABI research is appropriate to be applied for community-based work. We encourage ABI to move toward quantifying these goals, as it gains experience with pilots or other community-based work and has a better sense of their role within its overall research strategy.

PERFORMANCE ON PROCESS INDICATORS THROUGH DECEMBER 2004

As discussed in previous reports, three indicators were selected to represent the overall progress of the ABI program. These indicators track progress on fulfilling the mandates in the Act for the program to (1) develop targeted research programs in each of the five areas specified by the Act, (2) encourage and foster the conduct of research through the five member institutions, and (3) provide for systematic dissemination of research results to the public and the health care community so these findings may be applied to planning, implementation, and evaluation of any other programs of this state.

Develop targeted research programs by area.

Indicator: Number and amount of funding for ABI-Supported Research Projects, by institution and category of research as specified in the Initiated Act

The goal of this indicator was to ensure that ABI conducted research in areas that were relevant to the problems occurring in the state of Arkansas due to tobacco related diseases. The data in Table 8.1 show the number of projects in each of the research areas for each institution and the total amount of funding for each project. Total funding is the sum of ABI allocated monies and extramural funding. As expected, certain institutions focus on particular areas of research. For example, a good deal of research at UA-Ag focuses on agricultural research with medical implications (research category 1).

Indicator: Number of collaborative ABI research projects that involve researchers at more than one participating institution

The five institutions that make up ABI have worked collaboratively on many different projects as shown in Tables 8.2 and 8.3. The data in Table 8.2 highlight that collaborative projects across institutions doubled from 2002 to 2003 and remained steady during the 2003-2004 fiscal year and through July 2004-December 2004. The data in Table 8.2 also demonstrate how the collaborative process provides support to each university as newer, less established research institutions, such as ASU, are able to lead projects and partner with more established institutions, such as UAMS. Table 8.3 indicates that although the amount of ABI funding with collaborative projects has remained steady, the amount of extramural funding that is going towards cross-institutional research has increased substantially. For example, in 2002-2003, 17.5 percent of extramural funds were collaborative, whereas in 2003-2004, 26.8 percent of the funds were collaborative, which then increased to 40.9 percent for July 2004-December 2004.

Table 8.1 Number of Projects and Funding Amounts for ABI-Supported Research, by Institution and Category of Research

	July 2001 – June 2002		July 2002 – June 2003		July 2003 –June 2004	
	Number of Projects	Total Funding	Number of Projects	Total Funding	Number of Projects	Total Funding
Category 1						
ACH	0	$ 0	0	$ 0	0	$ 0
ASU	0	0	0	0	4	164,357
UA-Ag	2	3,163,121	3	3,051,057	17	1,971,638
UAMS	0	0	0	0	0	0
UAF	2	5,629,645	7	4,195,755	12	6,174,018
ABI total	4	8,792,766	10	7,246,812	33	8,310,013
Category 2						
ACH	0	0	0	0	0	0
ASU	0	0	0	0	3	606,302
UA-Ag	0	0	1	166,308	2	405,241
UAMS	0	0	0	0	0	0
UAF	0	0	1	120,000	1	76,000
ABI total	0	0	2	286,308	6	1,087,543
Category 3						
ACH	0	0	0	0	0	0
ASU	1	643,013	5	1,756,342	8	2,101,483
UA-Ag	0	0	1	136,483	1	120,709
UAMS	17	2,992,748	41	7,804,005	23	5,511,850
UAF	0	0	1	291,000	0	0
ABI total	18	3,635,761	48	9,987,830	32	7,734,042
Category 4						
ACH	1	307,015	2	4,465,862	5	3,127,589
ASU	0	0	1	125,105	0	0
UA-Ag	0	0	0	0	0	0
UAMS	0	0	0	0	22	5,889,784
UAF	0	0	2	795,916	0	0
ABI total	1	307,015	5	5,386,883	27	9,017,373
Category 5						
ACH	2	570,540	5	1,724,778	6	3,072,743
ASU	0	0	3	264,279	3	912,696
UA-Ag	0	0	0	0	0	0
UAMS	5	3,809,576	5	5,725,284	7	7,460,421
UAF	0	0	0	0	1	1,131,531
ABI total	7	$4,380,116	13	$7,714,341	17	$12,577,391

* Research categories are:

1. To conduct agricultural research with medical implications
2. To conduct bioengineering research focused on the expansion of genetic knowledge and new potential applications in the agricultural-medical fields
3. To conduct tobacco-related research that focuses on the identification and applications of behavioral, diagnostic, and therapeutic research addressing the high level of tobacco-related illnesses in the State of Arkansas
4. To conduct nutritional and other research focusing on prevention or treatment of cancer, congenital or hereditary conditions or other related conditions
5. To conduct other research identified by the primary educational and research institutions involved in ABI

Table 8.2 Collaborative Research Projects by ABI Institutions

Sponsoring Institution	Collaborative Projects Led by Institution	ABI Institutions Collaborating on Projects					Other Collaborators
		ACH	ASU	UA-Ag	UAMS	UA-Fay	
July 2001-June 2002							
ACH	2				2		1
ASU	1				1		0
UA-Ag	1	1			1		1
UAMS	1	1					0
UAF	1				1		0
Total ABI-funded	6	2	0	0	5	0	2
July 2002-June 2003							
ACH	2				2	1	1
ASU	4	1			3		0
UA-Ag	3	1			3		1
UAMS	1	1					0
UAF	3			2	2		2
Total ABI funded	13	3	0	2	10	1	4
July 2003-June 2004							
ACH	3				3	1	1
ASU	5	2			5		2
UA-Ag	7	3			5		
UAMS	1	1					
UAF	4			1	4		2
Total ABI funded	20	6		1	17	1	5
July 2004-December 2004							
ACH	7				7	1	
ASU	3				3		1
UA-Ag	7	3			5		
UAMS	2	2					
UAF	1				1		
Total ABI funded	20	5			16	1	1

Table 8.3 Portions of ABI and Extramural Funding Being Used for Collaborative Research Projects

	Percentage of Research Funding by Institution					
	ACH	ASU	UA-Ag	UAMS	UAF	Total ABI funding
July 2001-June 2002						
Funds from ABI	81.3%	100.0%	95.4%	1.9%	96.0%	49.4%
Extramural Funds	100.0	100.0	100.0	0.0	80.4	55.3
July 2002-June 2003						
Funds from ABI	16.5	72.6	84.4	1.5	14.6	31.8
Extramural Funds	10.7	96.1	100.0	1.7	19.1	17.5
July 2003 – June 2004						
Funds from ABI	73.6	38.5	35.1	2.2	21.9	29.5
Extramural Funds	62.0	64.7	46.1	1.2	53.7	26.8
July 2004–December 2004						
Funds from ABI	96.6	50.9	39.3	4.6	12.7	30.0
Extramural Funds	91.0	48.5	29.7	0.0	13.2	40.9

Indicator: Total dollar amount of ABI grant funding awarded for faculty research, total and by institution

The data in Table 8.4 and Figure 8.1 indicate that each of the five institutions has continued to be successful in leveraging funds to support research. ABI indicated in their annual report that the five institutions brought in more than $2 for every ABI dollar received in fiscal year 2003-2004. The greatest leveraging was achieved by UAMS, UAF, and ACH.

Table 8.4 Amounts of Funding Awarded for ABI Faculty Research

	ACH	ASU	UA-Ag	UAMS	UAF	ABI total
July 2001-June 2002						
ABI Funding	$535,100	518,337	750,000	2,152,569	520,855	4,476,861
Total Funding*	$877,555	643,013	3,163,121	6,802,324	5,629,645	17,115,658
Ratio of extramural to ABI	0.6	0.2	3.2	2.2	9.8	2.8
July 2002-June 2003						
ABI Funding	$1,489,823	1,316,671	1,943,581	3,632,974	1,354,600	9,737,649
Total Funding*	$6,190,640	2,145,726	3,353,848	13,565,289	5,402,671	30,658,174
Ratio of extramural to ABI	3.2	0.6	0.7	2.7	3	2.1
July 2003–June 2004						
ABI Funding	$1,495,240	2,158,636	1,897,962	3,147,700	1,312,963	10,012,500
Total Funding*	$6,200,332	3,784,838	2,548,396	18,862,055	7,381,549	38,777,170
Ratio of extramural to ABI	3.1	0.8	0.3	5.0	4.6	2.9
July 2004–December 2004						
ABI Funding	$1,106,812	476,441	830,151	2,603,087	1,540,000	6,556,491
Total Funding*	$5,049,407	522,599	2,252,055	4,273,553	5,621,344	17,718,958
Ratio of extramural to ABI	3.6	0.1	1.7	0.6	2.7	1.7

* Total funding is the sum of ABI funding and related extramural funding from other sources.

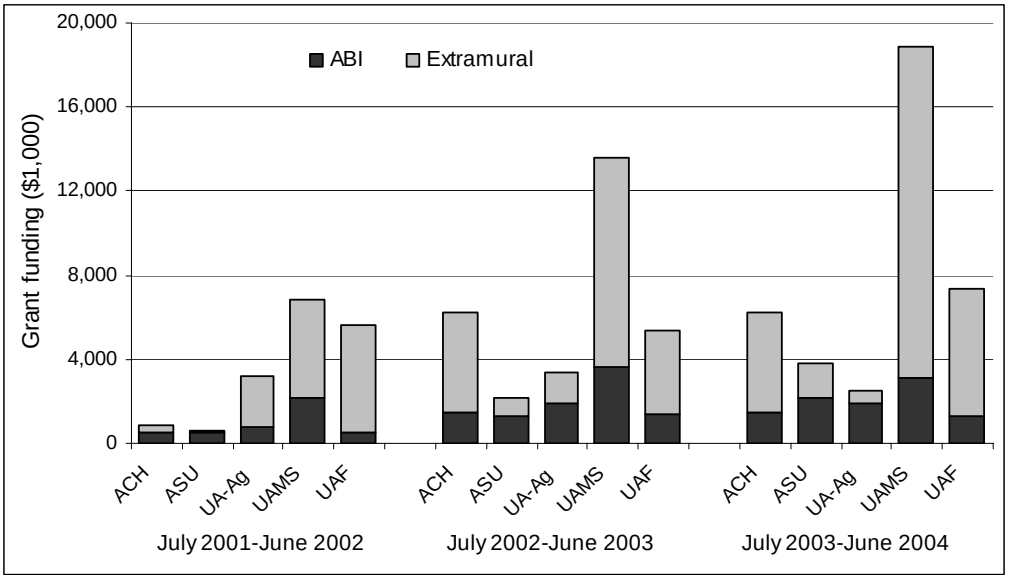

Figure 8.1 ABI and Extramural Funding for ABI Faculty Research

Indicator: Number of each type of service and promotional activities conducted by ABI researchers both inside and outside of the university community

Before the RAND evaluation began, ABI did not collect information from researchers on their service activities. Since that time, they have collected this information annually. The data in Table 8.5 indicate that ABI has generated numerous publications and has also worked to present information to the community through lectures and seminars, in person media contacts and press releases. Publications and seminars and lectures have increased, however, media contacts were slightly lower for the 2003-2004 fiscal year and press releases decreased by almost two-thirds, from 14 to 5.

Table 8.5 Service and Promotional Activity Encounters by ABI Research

	ACH	ASU	UA-Ag	UAMS	UAF	ABI total
July 2001-June 2002						
[Data not available]	na	na	na	na	na	na
July 2002-June 2003						
Publications	25	9	15	56	24	129
Lectures and Seminars	4	0	6	9	5	24
In-person media contacts	2	3	8	4	2	20
Press releases	0	4	1	4	5	14
July 2003-June 2004						
Publications	[55]	33	23	63	30	204
Lectures and Seminars	12	12	18	11	9	62
In-person media contacts	0	9	5	0	1	15
Press releases	0	2	2	0	1	5

ANALYSIS OF SPENDING TRENDS

Funds were appropriated for the individual institutions making up the ABI by Acts 1569 (ASU), 1577 (UAMS), 1578 (UAF), and 1579 (UA-Ag) of 2001 and Acts 1056, 1320, and 376 of 2003 for the first two biennia of the Tobacco Settlement Fund Allocation. Arkansas Children's Hospital Research Institute was appropriated funds through the UAMS appropriation. Table 8.6 details the appropriations by institution and fiscal year.

Table 8.7 presents the total Tobacco Settlement funds received and spent by ABI through the first two quarters of FY 2005. Note that only half a year of expenditures is presented for FY2005, the second year of the second biennium. This spending analysis only provides information for the total expenditures since providing amounts spent in the different categories would have unduly burdened the institutions without adding value to the evaluation.

Continuing the trend from prior years, ABI received less money than the amount appropriated in FY2004 and thus far in FY2005. A percentage of the funds received by each institution supported the central ABI administration (1.2 percent in FY2004, totaling $185,000, and 1.9 percent in FY2005, also totaling $250,000). With the exception of the UA-Ag, the institutions spent only a portion of the full Tobacco Settlement funds received during FY2004. Collectively, the five institutions spent slightly more than 60 percent of their funding. However, in the first half of FY2005 spending again increased, as the institutions appear to be spending more aggressively during the second year of the biennium.

Table 8.8 presents the percentage of Tobacco Settlement funds spent on research grants to faculty members for each institution. While the institutions varied in how rapidly they established their grants programs, by the end of FY2004 all of the institutions had started funding research projects. Quarterly expenditures varied across institution and over time. Starting with the third quarter of FY2004, the percentage of total Tobacco Settlement spending on research projects varied from 21 percent to 90 percent. (Other uses for the funds include purchase of equipment or new technology used in research, support for new researchers, and other related investments toward building the research programs.) During this period, UAMS and UAF consistently spent more than 79 percent of their Tobacco Settlement dollars on research projects. ACH spend around half on research projects during the last two quarters of FY2004 before increasing to around three quarters for the first half of FY2005. ASU varied more in their allocation of Tobacco Settlement funds to research projects with a dip down to 21 percent at the end of FY2004 before climbing to 65 percent in the second quarter of FY2005. UA-Ag generally spent a lower percentage on research projects compared to the other institutions with a high of 48 percent in the last quarter of FY2004.

Table 8.6
Tobacco Settlement Funds Appropriated to ABI Institutions, by Fiscal Year

	First Biennium		Second Biennium	
Appropriation Item	2002	2003	2004	2005
Arkansas State University				
(1) Regular salaries	$ 100,000	$2,015,084	$2,317,370	$2,317,370
(2) Personal service matching	30,000	544,525	626,197	626,197
(3) Maintenance & operations				
(A) Operating expense	242,500	717,175	824,771	824,771
(B) Conference & travel	0	120,000	137,970	137,970
(C) Professional fees	860,000	340,000	391,004	391,004
(D) Capacity outlay	411,380	537,304	617,890	617,890
(E) Data processing	0	0	0	0
Annual Total	$1,643,880	$4,274,088	$4,915,202	$4,915,202
Biennium Total	$5,917,968		$9,830,404	
UA for Medical Sciences				
(1) Regular salaries	$912,000	$1,967,200	$1,926,987	$1,926,987
(2) Personal service matching	183,400	394,700	350,773	350,773
(3) Maintenance & operations				
(A) Operating expense	249,040	524,144	524,144	524,144
(B) Conference & travel	40,000	60,000	60,000	60,000
(C) Professional fees	200,000	300,000	300,000	300,000
(D) Capacity outlay	200,000	1,000,000	1,000,000	1,000,000
(E) Data processing	0	0	0	0
(4) Arkansas Children's Hospital	767,220	1,994,772	1,994,772	1,994,772
Annual Total	$2,551,660	$6,240,816	$6,156,676	$6,156,676
Biennium Total	$8,792,476		$12,313,352	
University of Arkansas–Fayetteville				
(1) Regular salaries	$131,584	$319,312	$586,622	$586,622
(2) Extra help	105,268	255,450	0	0
(3) Personal service matching	69,558	154,424	132,987	132,987
(4) Maintenance & operations				
(A) Operating expense	154,136	385,872	586,622	586,622
(B) Conference & travel	0	0	0	0
(C) Professional fees	0	0	0	0
(D) Capacity outlay	416,684	1,165,742	1,040,259	1,040,259
(E) Data processing	0	0	0	0
Annual Total	$877,230	$2,280,800	$2,346,490	$2,346,490
Biennium Total	$3,158,030		$4,692,980	
UA Division of Agriculture				
(1) Regular salaries	$262,130	$723,080	$1,316,855	$1,358,521
(2) Personal service matching	61,408	169,562	304,635	312,969
(3) Maintenance & operations				
(A) Operating expense	160,937	623,937	375,000	375,000
(B) Conference & travel	0	0	50,000	50,000
(C) Professional fees	0	0	0	0
(D) Capacity outlay	392,755	764,221	300,000	250,000
(E) Data processing	0	0	0	0
Annual Total	$877,230	$2,280,800	$2,346,490	$2,346,490
Biennium Total	$3,158,030		$4,692,980	
ABI Annual Total	$5,950,000	$15,076,504	$15,764,858	$15,764,858
ABI Biennium Total	$21,026,504		$31,529,716	

Table 8.7
Tobacco Settlement Funds Received and Spent by Arkansas Biosciences Institute, by Fiscal Year

Institution	2002		2003		Biennium Difference**	2004		2005 (July –Dec)	
	Received	Spent	Received	Spent		Received	Spent	Received	Spent
ASU	$1,449,703	$518,337	$3,759,916	$4,575,988	$115,294	$3,852,488	$2,728,273	$3,135,798	$2,083,559
UAMS	1,353,190	793,704	3,509,602	4,079,901	(10,813)	3,596,012	1,966,166	2,927,035	1,215,793
ACH	676,595	419,967	1,754,801	2,032,114	(20,685)	1,798,006	774,264	1,463,517	626,046
UAF	773,611	69,298	2,006,418	2,701,121	9,610	2,055,818	820,828	1,673,368	1,427,526
UA-Ag	773,611	771,058	2,006,418	2,073,376	(64,405)	2,055,818	1,947,191	1,673,368	869,254
Total	5,026,710	2,572,365	13,037,155	15,462,500	29,000	13,358,142	8,236,722	10,873,086	6,222,177
ABI Central*	$185,000	$117,526	$250,000	$317,412	$62	$250,000	$196,001	$250,000	$98,639

* This amount is included in the expenditures of the individual institutions and therefore is not included in the annual total.

** The amount ASU and UAF reported returning to the general Tobacco Settlement fund was greater than the amounts reported above due to the constraint that money could not be shifted across allocation categories. Also, because monies could not be shifted across institutions, the total amount institutions returned to the general Tobacco Settlement fund was the sum of the amounts returned by ASU and UAF.

Table 8.8
Quarterly Expenditures on Research Projects by ABI Institution

	2002				2003				2004				2005	
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
ASU														
Research spending	0	0	0	0	0	0	231,665	1,060,819	279,849	254,114	279,874	254,114	336,803	510,612
Number of projects	0	0	0	0	0	0	10	10	10	9	10	10	10	10
Percent on Research	0	0	0	0	0	0	81%	70%	61%	50%	48%	21%	26%	65%
UAMS														
Research $	na	29,703	128,362	201,528	144,257	579,267	1,011,635	2,027,804	209,307	415,185	543,863	549,590	537,414	615,520
Number of projects	na	4	10	12	15	19	34	49	7	13	26	36	52	61
Percent on Research	na	39%	83%	88%	*	*	*	*	82%	90%	81%	96%	95%	94%
ACH														
Research spending	na	na	12,904	250,922	67,990	81,420	277,570	962,060	84,297	162,677	55,479	168,634	229,530	251,207
Number of projects	na	na	2	3	3	5	5	9	6	5	8	12	10	10
Percent on Research	na	na	97%	66%	64%	59%	83%	67%	65%	76%	56%	51%	75%	78%
UAF														
Research spending	+	+	+	+	+	+	+	+	+	+	128,495	353,518	704,954	453,133
Number of projects	+	+	+	+	+	+	+	+	+	+	14	14	21	21
Percent on Research	+	+	+	+	+	+	+	+	+	+	85%	80%	83%	79%
UA-Ag.														
Research $	0	0	0	0	470	55,237	203,327	211,946	53,544	131,130	220,958	329,433	127,990	126,572
# projects	0	0	0	0	1	7	9	10	9	15	15	15	14	14
Percent on research	0	0	0	0	0.1%	13%	47%	29%	25%	26%	41%	48%	25%	35%

* UAMS changed accounting systems during the year, and most non-research entries were made in June 2003, making it impossible to determine the percentage of funds spent on research projects.

+ University of Arkansas–Fayetteville did not separate out the expenditures on research projects until January 2004. Thus, they do not have data to report in this table.

na No expenditures were made during this time period, on research projects or otherwise. Zero indicates there was spending on salaries and infrastructure, but not on specific research projects.

PROGRAM-SPECIFIC RECOMMENDATIONS

As discussed above, ABI has made observable progress in actions relative to our recommendations in the first evaluation report, and in particular, is working proactively to strengthen its ties and working relationships with the local communities. This focus is reflected in its long-term goals to increase research with community impacts. At the same time, the ABI institutions continue to grow their research programs, successfully leveraging the limited Tobacco Settlement funds to bring in extramural funding. Although formal mechanisms to stimulate collaboration among the ABI institutions have not yet been established, the ABI has undertaken a number of activities to help stimulate working relationships on an informal basis. As ABI moves forward in the next year, the recommendations presented here focus on two areas that can contribute to its continued maturation and can help it assess and document the impact it is having for the state.

- **ABI should continue to work to better publicize the ABI initiatives and findings to the state of Arkansas and nationally.**

ABI has been working towards many of its goals. They have established a strong record of leveraging ABI funding and have also increased their collaborative efforts across all five institutions. They have done a good job of disseminating their work to the scientific community, however, more emphasis is needed on disseminating their work and findings nationally and to the broader Arkansas community. Both their media contacts and press releases were lower for this fiscal year.

- **ABI should begin to examine the short-term impact of their research on the broader Arkansas community.**

During the past year, ABI has also been focused on ways that they can better track program outcomes for the short-term. It is difficult to measure the short-term impact of research as many factors that might impact the broader community, such as patents and potential biotech companies, take a long time to develop. Thus, ABI has begun to focus on ways to track the short-term impact by examining where higher level students, such as graduate students, postdoctoral fellows, and fellows (at ACH) go when they have completed their education. This will be informative in determining how many students stay in the surrounding community, and how many may go on to other prestigious locations. In addition, ABI will be examining the number of SBIR proposals and grants that are written and received to determine collaborations with the surrounding business community.

Chapter 9
Medicaid Expansion Programs

UPDATE ON PROGRAM ACTIVITIES

From July 2003 to December 2004, the Medicaid Expansion Programs, with the exception of the Pregnant Women's Expansion, have continued to grow, increasing enrollment or utilization at a steady rate. Between July 2003 and December 2004, both enrollment in the AR-Seniors program and utilization of the hospital expansion program grew by over 17 percent. During this same time period, enrollment in the Pregnant Women's Expansion program decreased by 6 percent. It is unclear why there was this decline in enrollment, but we may begin to see increases again, given the new educational efforts to providers by the Department of Human Services (DHS) described below.

CMS has still not approved the AR-Adults program for Arkansas. Without CMS approval, the state cannot get the federal match for the Tobacco Settlement dollars. The major problem is that the proposals submitted thus far cannot demonstrate budget neutrality. The state has made the argument that if they can cover some subset of the 19-64 year old population that is currently uninsured, a cost savings when they reach Medicare eligibility will be realized. However, this timeframe is not acceptable to CMS. For CMS to consider the program budget neutral, the state has to demonstrate that the program will be budget neutral within two years of implementation. In October 2004, a revised application for an 1115 waiver was submitted to CMS proposing coverage for uninsured 19-64 year olds working for small employers. This has not yet been approved, but is still under review.

In the most recent legislative session, legislators voted to merge the Departments of Health and Human Services into one department. It is unclear at this time how this merger will affect the programs funded by the Tobacco Settlement funds. However, early speculation suggests that this reorganization will directly benefit the consumer by streamlining access to programs and services offered by both agencies.

RESPONSES TO EVALUATION RECOMMENDATIONS IN THE 2004 REPORT

During the past year, the Medicaid Expansion Program has taken the following actions relevant to the recommendations made in the FY 2004 evaluation report.

Recommendation: Dedicate some of the Tobacco Settlement funds for Medicaid program administration to support outreach and education of beneficiaries in the expanded Medicaid programs.

Program response: In November 2004, DHS sent a mailing out to all AR-Seniors beneficiaries explaining to them what services they were eligible to receive. The mailing consisted of a one-page notice in large font with a copy of an Arkansas Medicaid Program card on it. Services and benefits including prescription drug benefits, personal care services, eye exams, and coverage of Medicare deductibles, coinsurance, and premiums were explicitly listed on the notice. This type of message was only sent once and only sent to the AR-Seniors beneficiaries. Rather than send a similar notice to women enrolled in the Pregnant Women's

Expansion Program, brochures were distributed to appropriate providers in the state to make this information available to their patients.

Recommendation: The Department of Human Services should allocate more resources to increase the staffing in county offices.

Program response: The state was facing some staffing challenges at the time of our first site visits in Spring 2003. The state had a hiring freeze in effect then and was facing the possibility of staff reductions. As a result, the Division of County Operations (DCO) delayed hiring some of the additional staff afforded to it by the Tobacco Settlement funds. The reason for not filling these positions was not related to the lack of funds, but rather to the fact that the Division may have needed to reduce the number of regular Medicaid staff positions. The agency wanted the opportunity to reassign current skilled staff to the Tobacco Settlement positions in lieu of hiring new employees. The hiring freeze was resolved shortly after our site visits, and the extra positions were filled.

Currently, the positions appropriated using the Tobacco Settlement funds (63 positions) have been allocated to DHS but not all are being used. Some positions were allocated for the AR-Adults program, which has not yet been established. If there are increases in enrollment or the AR-Adults program is approved, DHS can easily add more staff positions. Currently, DHS staff report they have enough staff positions for the number of enrollees they encounter so staffing is not a concern at this time.

Recommendation: Medicaid staff should continue to work with CMS to develop an acceptable 1115 Waiver for the AR-Adults program.

Program response: As described above, DHS has developed several plans for CMS review regarding the AR-Adults program. To date, CMS has not approved these plans, as it is not clear that they are cost neutral.

TWO-YEAR GOALS

Given that the Medicaid budget is subject to regular and unanticipated changes, it is difficult for the DHS to plan beyond the next budget cycle. As a result, two-year goals have been established for the Medicaid program, rather than longer-term, five-year goals. The following four goals have been identified:

5. Beneficiaries currently enrolled in the AR-Seniors program will utilize services at the same or higher levels as the average dually-eligible beneficiary not enrolled in the AR-Seniors program.
6. Beneficiaries currently enrolled in the Pregnant Women's Expansion Program will utilize services at the same or higher levels as the average pregnant Medicaid beneficiary not enrolled in the Pregnant Women's Expansion program.
7. Enrollment in the AR-Seniors program will increase by 10 percent.
8. Enrollment in the Pregnant Women's Expansion Program will increase by 15 percent.

The Medicaid Expansion Program plans to reach Goals #1 and #2 by conducting educational outreach efforts for current enrollees, the newly enrolled, and potential enrollees to both the AR-Seniors program and the Pregnant Women's Expansion Program. As discussed

previously, DHS has conducted an educational outreach effort among currently enrolled AR-Seniors beneficiaries in the Fall of 2004. DHS will continue to conduct these educational efforts for newly enrolled and currently enrolled beneficiaries in both the AR-Seniors Program and the Pregnant Women's Expansion Program.

To reach Goals #3 and #4, DHS will engage in appropriate outreach efforts to identify those who are potentially eligible and encourage them to enroll. As discussed in Chapter 2, the Arkansas Legislature recently voted to merge the Department of Health into the Department of Human Services to create a new Department of Health and Human Services. The health services staff will often have direct contact with pregnant women and will be able to better inform them about available services and direct them to the human services staff for enrollment. In some locations, a DCO worker may be stationed in a Local Health Unit to assist with Medicaid applications. To increase enrollment efforts for the AR-Seniors program specifically, DHS plans on sending out notices to Qualified Medicare Beneficiaries (QMB) in addition to working with the Division of Aging and Adult Services to make potentially eligible individuals aware of the program and services available to them. Increasing the federal poverty level (FPL) ceiling for the AR-Seniors program above the current 80 percent level is another option that could increase enrollment to the program.

PERFORMANCE ON PROCESS INDICATORS THROUGH DECEMBER 2004

As discussed in previous reports, five indicators were selected that represent the overall progress of the Medicaid Expansion Programs. These indicators reflect the goal stated in the Act to "expand access to healthcare through targeted Medicaid expansions thereby improving the health of eligible Arkansans." The indicators reflect efforts to: (1) provide access to Medicaid services for pregnant women with income between 133 percent and 200 percent of the FPL, (2) expand Medicaid-reimbursed hospital care and reduce cost-sharing for hospital stays of Medicaid beneficiaries age 19 to 64, (3) expand Medicaid benefits to Medicare beneficiaries deemed eligible for Qualified Medicare Beneficiary status and with incomes below 80 percent of the FPL, (4) establish a new benefit to increase access to a limited package of Medicaid-funded services for indigent adults, and (5) leverage Tobacco Settlement funds allocated to the Medicaid Expansion Programs.

Provide access to Medicaid services for pregnant women with income between 133 percent and 200 percent of the Federal Poverty Level

Indicator: Percentage of pregnant women with income between 133 percent and 200 percent of the federal poverty level participating in Medicaid

Table 9.1 presents the enrollment activity for the pregnant women's expansion program, both as the count of women enrolled in each period and the proportion of estimated eligible women. The denominator used in establishing the proportion was based on Department of Health 2002 estimates of potentially eligible individuals. In total, 7,800 women were estimated to be eligible in 2002 and we divided this amount by two to reflect the six-month time periods used for evaluation. According to the Department of Health, the number of women between 133 percent and 200 percent of the federal poverty level can be expected to be lower than the estimated 7,800 because more of the women in the higher income group will have personal or third party resources to cover their pregnancy.

Therefore, the estimate reported can be considered a conservative estimate, but the size of the difference cannot be estimated.

There were steady increases in enrollment for the pregnant women's Medicaid expansion program. However, there was a 13.8 percent decrease in enrollment between the second period of 2003 and the first period of 2004. A small increase was observed subsequently for the second period of 2004.

Table 9.1 Use of Expanded Pregnancy Medicaid Benefits by Eligible Women

	Enrollees in Pregnancy Benefits	
Six-Month Period	Number	Percentage *
Jul-Dec 2001	266	6.8%
Jan-Jun 2002	1,148	29.4
Jul-Dec 2002	1,705	43.7
Jan-Jun 2003	1,997	51.2
Jul-Dec 2003	2,081	53.4
Jan-Jun 2004	1,829	46.9
Jul-Dec 2004	1,957	50.2

* The denominator used was 3,900 potential eligibles, based on a 2002 estimate established by the Department of Health of 7,800 potential eligibles annually, which was divided by 2 to reflect the six-month time periods used for the evaluation.

Expand Medicaid-reimbursed hospital care and reduce cost sharing for hospital stays of Medicaid beneficiaries age 19-64

Indicator: Number of eligible Medicaid recipients using expanded inpatient reimbursements

Table 9.2 presents the number of eligible adult Medicaid recipients using expanded hospital reimbursements. It includes use of either reduced co-payments or expanded hospital days covered per year from 20 to 24 days. The program experienced a steep decline in utilization between the first and second periods of 2003, followed by a slight increase beginning in the second period of 2004.

Table 9.2 Medicaid Enrollees Using Expanded Inpatient Benefits

Six-Month Period	Count of Beneficiaries *
Jul-Dec 2001	2,448
Jan-Jun 2002	22,933
Jul-Dec 2002	26,305
Jan-Jun 2003	29,077
Jul-Dec 2003	21,303
Jan-Jun 2004	21,732
Jul-Dec 2004	24,961

* The eligible population is Medicaid recipients between the age of 19 and 64.

Expand Medicaid benefits to Medicare beneficiaries deemed eligible for Qualified Medicare Beneficiary status and with incomes at or below 80 percent of the FPL

Indicator: Percentage of eligible persons age 65+ with income ≤80 percent of FPL using expanded coverage (AR-Seniors)

Table 9.3 presents summary information on enrollment of Medicare beneficiaries who have been deemed eligible for the AR-Seniors program. To be eligible, one must first apply to be a QMB. Once that individual's income falls to 80 percent of the FPL or lower, he or she becomes eligible for the AR-Seniors program and can receive the full array of Medicaid benefits. In this table, we present the counts of individuals enrolled in each period as well as the proportion of all potentially eligible who are actually enrolled. We present the proportions with two different denominators. The first denominator is based on Medicaid estimates of the eligible QMB population (approximately 5,000 enrollees). Based on this denominator, the AR-Seniors program is at almost 95 percent of capacity. The second denominator comes from the Arkansas Census Data. We estimate that in 1999, there were almost 52,000 adults age 65 and older whose income was at or below 80 percent of the FPL. Based on this denominator, the program is at just over 9 percent capacity. Overall, there has been a steady increase in enrollment for the AR-Seniors program.

Table 9.3 Eligible Elderly Persons Using Expanded Medicaid Coverage

Six-Month Period	Participants in Expanded Coverage for Seniors		
	Number	Percentage of Eligible QMBs*	Percentage of Total Eligibles in AR**
Jul-Dec 2001	0	0	0
Jan-Jun 2002	0	0	0
Jul-Dec 2002	1,567	31.1	3.0
Jan-Jun 2003	3,795	75.9	7.3
Jul-Dec 2003	4,040	80.8	7.8
Jan-Jun 2004	4,120	82.4	8.0
Jul-Dec 2004	4,734	94.7	9.2

* Denominator estimated by the Arkansas Medicaid program based on number of individuals in Arkansas enrolled as Qualified Medicare Beneficiaries (5,000 enrollees).

** Denominator obtained from the Arkansas Census data in the PUMS 1% file (51,755 potentially eligible based on 1999 estimates).

Establish a new benefit to increase access to a limited package of Medicaid-funded services for indigent adults

Indicator: Percentage of adults eligible as AR-Adults participating in Medicaid expansion with limited benefits package

This program is not implemented yet because it has not been approved by the Centers for Medicare and Medicaid Services.

Leverage Tobacco Settlement funds allocated to the Medicaid Expansion Programs

Indicator: Ratio of total spending to Tobacco Settlement funds allocated for the expanded Medicaid programs.

Part of the design of the Medicaid program is to match the state investment in Medicaid services to federal dollars. The federal match for Medicaid health care service costs has been three dollars for every state dollar spent (although as noted below, this will change in the second year of the next biennium). The match for program administration costs is one federal dollar for every state dollar. Therefore, by the basic program terms, the Tobacco Settlement funds applied to the Medicaid expansion are leveraging external dollars substantially.

Issues regarding the state's education funding could continue to be an issue as the Supreme Court decides whether to re-open the case. Actions to direct more state funding to education could have an impact on the Medicaid Program. The Medicaid budget will probably not be cut for the remainder of FY05 and the FY06 appears to be adequately funded.

A second source of concern for the Medicaid budget comes from 1) reductions in the Federal Financial Participation (FFP) rate and 2) proposals by the President and Congress to make reductions in the Medicaid Program to control spending. The FFP has been reduced due to the loss of an enhanced matching level made available to states for several quarters and the recalculation of the state's rate based on our per capita income. The state is closely monitoring the potential impact of any program reductions by Congress as they attempt to balance the Federal budget. Currently, for every dollar Arkansas allocates to Medicaid, the federal government pays out three dollars. The future match rate will be lowered to 73.77% in FFY 06 and 73.13% in FFY 07.

The Medicaid program is also concerned about the "clawback" of funds to the federal government as it relates to the Medicare Prescription Drug Program. Prescription drugs for dually-eligible beneficiaries will be paid for by Medicare rather than Medicaid beginning in January 2006. What is of great concern right now from the state perspective is that nursing home residents who currently have an unlimited pharmacy benefit under Medicaid will not have the same under Medicare. If the state pays for a drug for a nursing home resident after the federal program is implemented, the cost of the drug will be paid for by general revenue funds; they will not be able to use matched funds for this purpose.

ANALYSIS OF SPENDING TRENDS

Act 1574 of 2001 and H.B. 1377 of 2003 appropriated funds for the Medicaid Expansion Program for the first two biennium periods of the Tobacco Settlement Fund Allocation. Table 9.4 details the appropriations by fiscal year. Separate appropriations were made for three components of Medicaid operations--county operations (where enrollments are managed), Medicaid Services (administration of health care benefits), and Medical Services (expenses for health care services delivered to recipients). The appropriation amounts reported include the federal matching dollars for the Medicaid program.[7]

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[7] The funds appropriated included both the state and federal amounts to be spent on the Medicaid program. The Medicaid program staff reported that it was not possible for them to disaggregate the federal matching dollars from Tobacco Settlement funds, so they provided us with the total numbers.

Table 9.4 Appropriations for the Medicaid Expansion Program, Sum of Tobacco Settlement Funds and Federal Matching Funds, by Fiscal Year

	First Biennium		Second Biennium	
Item	2002	2003	2004	2005
Section 3: County Operations				
(1) Regular salaries	$316,040	$1,242,171	$1,389,539	$1,427,057
(2) Personal service matching	91,652	360,230	466,522	473,403
(3) Maintenance and general operation				
(A) Operating expenses	197,974	195,795	195,795	195,795
(B) Conference and travel	0	0	0	0
(C) Professional fees	0	0	0	0
(D) Capital outlay	69,300	0	0	0
(E) Data processing	0	0	0	0
(4) Purchase data processing	1,000,000	50,000	50,000	50,000
Section 4: Medicaid Program Management				
(1) Regular salaries	65,361	67,061	72,539	74,497
(2) Personal service matching	18,955	19,448	20,024	20,383
(3) Maintenance and general operation				
(A) Operating expenses	15,973	15,973	15,973	15,973
(B) Conference and travel	2,000	2,000	2,000	2,000
(C) Professional fees	0	0	0	0
(D) Capital outlay	9,000	0	0	0
(E) Data processing	0	0	0	0
Section 5: Medical Services				
(1) Prescription drugs	7,769,669	29,063,678	29,063,678	29,063,678
(2) Hospital and medical services	23,432,208	46,765,542	46,765,542	46,765,542
Annual Total	$32,988,132	$77,781,898	$78,041,612	$78,088,328
Biennium Total	$110,770,030		$156,129,940	

The following analysis describes the expenditures for the Medicaid Expansion Program from July 2001 until December 2004, including spending of both the Tobacco Settlement funding and the matching federal funds. Because December 2004 is the middle of the second year of the second biennium, no year totals for FY2005 are presented and it is not possible to fully detail expenditures in the second biennium because it is not yet over.

Table 9.5 presents the total annual funds spent by the Medicaid Expansion Program during this period. The original act creating the Medicaid Expansion Programs called for four different expansion programs; however, as described above, the AR-Adults program has not been approved. Therefore, it is not surprising that the Medicaid program did not spend the full amount it was appropriated in the first biennium and continued to under-spend in FY2004 and the first two quarters of FY2005. However, with only 20 percent of the total appropriated funds spent in FY2004, it is clear that under-spending continues to occur in the other three expansion programs. In particular, funds for prescription drugs have been substantially under-spent.

The administrative staff and overhead expenses required for the Medicaid Expansion Program are minimal compared to the medical services expenses. Very little has been spent on regular salaries, fringe, and maintenance and operations. The two management categories

funded are County Operations, which handles the enrollment processes for each expansion program, and Program Management, which administers the Medicaid service delivery processes and interactions with and payments for providers. (Expenses for medical care services, which are the vast majority of the spending, are in separate appropriation line items.) For FY2004, County Operations spent only about 35 percent of the amount appropriated for it, and Medicaid program management spent about 59 percent of the $100,536 appropriated for it.

Table 9.5 Spending by the Medicaid Expansion Program, Sum of Tobacco Settlement Funds and Federal Matching Funds, by Fiscal Year

Item	2002	2003	2004	2005*
Section 3: County Operations				
(1) Regular salaries	$ 0	$ 230,661	$ 435,996	$222,070
(2) Personal service matching	0	229,605	295,259	140,703
(3) Maintenance and general operation				
(A) Operating expenses	0	11,127	3,256	1,850
(B) Conference and travel	0	0	0	0
(C) Professional fees	0	0	0	0
(D) Capital outlay	0	0	0	0
(E) Data processing	0	0	0	0
(4) Purchase Data Processing	0	0	11,094	5,049
Total County Operations	0	$471,393	$745,605	$369,672
Section 4: Program Management				
(1) Regular salaries	28,001	45,752	48,178	18,927
(2) Personal service matching	4,858	8,434	12,635	6,953
(3) Maintenance and general operation				
(A) Operating expenses	0	0	4,298	1,734
(B) Conference and travel	0	0	0	0
(C) Professional fees	0	0	0	0
(D) Capacity outlay	0	0	0	0
(E) Data processing	0	0	0	0
Total Program Management	$32,858	$54,186	$65,111	$27,614
Section 5: Medical Services				
(1) Prescription drugs	22,881	936,436	3,610,946	2,445,544
(2) Hospital and medical services	4,651,310	11,673,385	11,317,329	7,662,201
Total Medical Services	$4,651,310	$12,609,821	$14,928,275	$10,107,755
Annual total spending	$4,707,049	$13,135,400	$15,738,991	$10,505,041

* Amounts spent through December 31, 2004.

Due to the large difference between appropriated funds and expenditures, unspent Medicaid Expansion funds were put into a Rainy Day Trust Fund (Acts 2002 [Ex. Sess.], No. 2, § 11) to be used during periods of budget shortfall for the general Medicaid program. This fund was used in FY2003, when $17,733,032 in Tobacco Settlement funds were used as match for general Medicaid expenditures, for a total expenditure of $68,946,469.

Figure 9.1 highlights the quarterly spending of the Medicaid Expansion Program for the three major categories outlined in the appropriation: County operations, Medicaid services, and Medical Services. Spending for all three categories has increased with time though not at a steady rate. The increase in spending for Medical Services in FY2004 is attributable to a large increase in Prescription Drug expenditures, while Hospital and Medical Services' spending remained the same. Expenditures for operations for Medicaid program management were so small that they are barely visible on the figure.

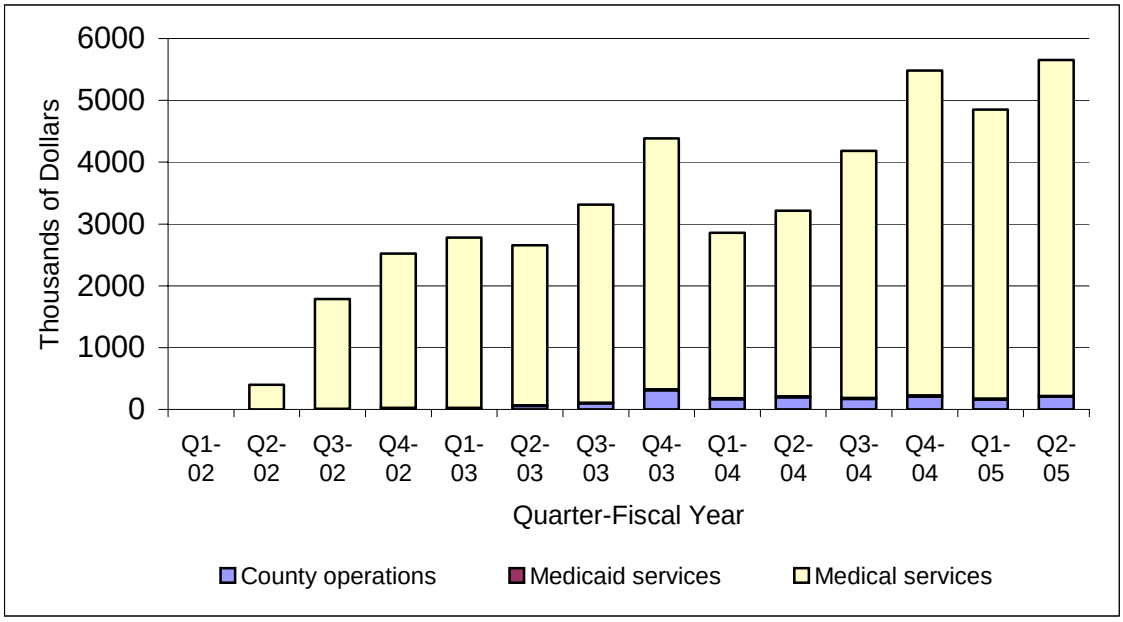

Figure 9.1 Medicaid Expansion Program Spending, Sum of Tobacco Settlement Funds and Federal Matching Funds, by Program Office, by Quarter of Fiscal Years

Figure 9.2 charts the spending of the three operational Medicaid Expansion Programs from their inception in the second quarter of FY2002 through the second quarter of FY2005. The inpatient hospital program was the first program to begin spending Tobacco Settlement and matching federal funds in November 2001 (second quarter of FY2002). The pregnant women expansion program began in March 2001 (third quarter of FY2002). The AR-Seniors program began in November 2002 (second quarter of FY2002) and spending has increased steadily from that point. After two quarters of start-up, spending for the pregnant women expansion grew about 11 percent from FY2003 to FY 2004. At the current rate for FY2005, spending would increase 13 percent from FY2004. The inpatient hospital expansion spending fluctuates from quarter to quarter and from year to year. This spending decreased by 15 percent in FY2004, but it appears to be increasing again in FY2005.

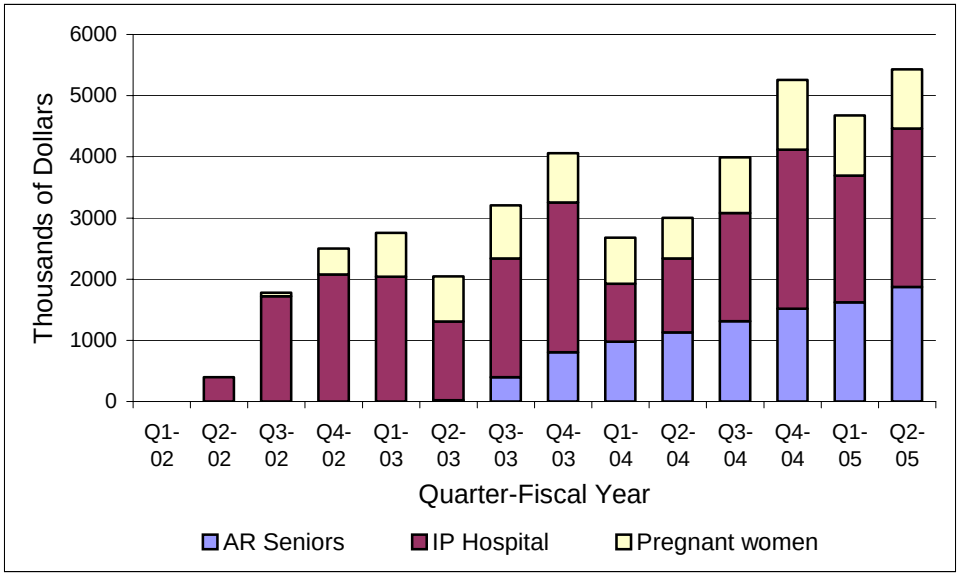

Figure 9.2 Spending by the Medicaid Expansion Program, Sum of Tobacco Settlement Funds and Federal Matching Funds, by Program, by Quarter

PROGRAM-SPECIFIC RECOMMENDATIONS

While the Medicaid programs show positive growth in most cases, there is still a substantial need for more education and outreach so the general population can be reached and informed about the available programs. In addition, DHS needs to do more to educate enrolled populations to ensure they understand what their benefits are under this coverage in terms of health care services. No progress has been made in establishing the AR-Adults program because DHS has not been able to demonstrate budget neutrality under CMS' narrow definition. Additionally, DHS has substantially under-spent the Tobacco Settlement funds allocated to the Medicaid Expansion Programs. Below are two recommendations that come out of our evaluation, in part inspired by the issues highlighted here.

- **The Medicaid Expansion Programs should continue to education newly enrolled and current enrollees in the Pregnant Women's Expansion Program and in the AR-Seniors program regarding the services they are eligible to receive under their respective programs.**

Based on feedback from the RAND evaluation, the Department of Human Services distributed a packet of information to AR-Seniors enrollees in the Fall of 2004 regarding the services they are eligible for under the program. However, DHS did not send similar materials to those enrolled in the Pregnant Women's Expansion Program and there are no current plans to continue the education efforts for new enrollees. DHS should create an ongoing consumer education campaign that will provide information to current and new enrollees on a regular basis, several times a year. In particular, in light of the coming implementation of the Medicare Prescription Drug Program, dually-eligible beneficiaries will be faced with some significant changes in coverage. Most notable will be the shift in prescription drug coverage from the

state's responsibility through Medicaid to the federal government's responsibility through Medicare. This will undoubtedly cause great confusion among some dually-eligible beneficiaries and will make an educational campaign effort by the Medicaid Expansion Programs even more important.

- **The Medicaid Expansion Programs should find alternate uses for allocated funds currently unspent.**

As reported above in the section on spending analyses, the Medicaid Expansion Programs under-spent relative to what was allocated from the Tobacco Settlement Fund. These findings echo the problems with financial management raised in last year's report. Even after accounting for the set aside for the AR-Adults program, which has not yet been approved, spending on the other three programs is lower than we would expect it to be. Given that CMS has not yet approved the AR-Adults program and with other budget constraints at the federal level, they will likely not approve this program anytime in the near future, we recommend that DHS find alternative ways to spend the unspent funds. They should explore new approaches for the AR-Adults program that will not require CMS approval (such as a program based only on state funds) or that do achieve budget neutrality. An example of an approach that may demonstrate budget neutrality would include narrowing the eligible beneficiary population to those age 55 to 64, who are at highest risk for being uninsured, while also having the highest level of health care needs among the non-elderly adult population. Other suggestions for ensuring that allocated funds are spent include increasing the federal poverty limit on the Pregnant Women's Expansion Program and the AR-Seniors Program. Additionally, DHS might also consider reducing the coinsurance required for hospital stays for Medicaid beneficiaries age 19-64 or increasing the number of covered days beyond 24 days per Fiscal Year for those 21 and older.

Chapter 10
Evaluation of Smoking-Related Outcomes

Our evaluation of the effect of the Tobacco Funded programs on the well-being of the people of Arkansas is divided into two parts. This chapter presents our findings regarding the effect of the programs on smoking prevalence and on other behaviors and attitudes related to smoking. Chapter 11 reports our current evaluation and plans for future evaluation of the effect of programs on non-smoking outcomes.

HIGHLIGHTS OF FINDINGS ON SMOKING OUTCOMES

In last year's report we emphasized that it was too early to expect to be able to detect an impact of the Tobacco Settlement programs on smoking outcomes for a number of reasons. Programs take time to set up and take even longer to have an effect on behavior. Often effects only occur after prolonged exposure to the program or exposure to many program efforts. It takes time to collect and prepare data on individual behavior for analysis.

With every passing year, we are more likely to be able to measure an effect of the programs. As we reported last year, we do not expect to be able to detect a significant impact on adult smoking prevalence until 2006 when we will have access to data for smoking behavior in 2005. Most of the programs were not fully implemented until 2002, and we expect a three or four year lag until measurable changes in smoking would occur. This expectation is based on the experience in other states that have implemented comprehensive smoking control programs, as reported by the U.S. Surgeon in its 2000 report.[8]

In spite of these limitations, we are beginning to detect an impact of tobacco control programming, especially in vulnerable populations such as youth and pregnant women. The effects addressed here are changes in overall smoking behavior across the state's population, which are influenced collectively by the actions taken by various programs to affect this outcome, including tobacco taxes, smoke-free environment laws, the Tobacco Settlement programs, and other unidentified factors.

- Tobacco Settlement programming has successfully reduced smoking among young people.
    - Young adults, age 18 to 25, are smoking less than would be expected based on pre-programming trends.
    - Pregnant teenagers are smoking less than would be expected based on pre-programming trends
    - There has been dramatically improved compliance with laws prohibiting sales of tobacco products to minors.
- Arkansas avoided the increase in adult smoking that occurred, on average, in the surrounding states from 2000 through 2003. Arkansas has increased cigarette taxes and tobacco control spending over this period, while on average, the other states have not.

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[8] Reducing Tobacco Use: A Report of the Surgeon General. Chapter 7 Comprehensive Programs, 2000.

- Tobacco Settlement programming has successfully reduced smoking among all pregnant women.
- Cigarette sales continue to decline, although the rate of decline has not accelerated since the beginning of the Tobacco Settlement programming.
- Our analysis of smoking prevalence in the Delta region shows no program impact. In fact, pregnant women in the Delta are smoking more since the beginning of Tobacco Settlement programming.
- Our analysis of the variation in smoking by county does not yet provide evidence that people who live in areas where the ADH focused their activity are less likely to smoke.
- Data from the 2002 and 2004 AATS are another source for information on smoking prevalence and also provide information on attitudes toward smoking and smoking regulation. Unfortunately, the 2004 wave of the survey appears to have undersampled smokers, making it difficult to interpret its findings.

An important part of any evaluation is the step of examining the extent to which the programs being evaluated are having effects on the outcomes of interest. The types of outcomes might range from attitudes and behaviors of the targeted population to the clinical health of those being served. The seven programs supported by the Tobacco Settlement funds are extremely diverse, and therefore, the outcomes of interest vary widely.

Assessment of program impacts requires the ability to connect the effort undertaken by a program to the expected outcome in a way that takes into account other factors that influence the outcome. If this is not done, changes in an outcome could be attributed incorrectly to a program's interventions when in fact the changes were due to other factors. Examples of other factors include the following:

- Broader (nationwide or regional) trends that are independent of local program efforts
- Continuation of trends that pre-date the program and reflect effects of earlier actions or interventions
- Changes in the demographic composition of the population
- Efforts by other related programs

Assessment also requires that findings be presented with an indication of their statistical precision. Whenever survey data are collected and analyzed, it is important to report not only the size of the effect, but also the degree of certainty. The degree of certainty can be reported as a margin of error (+/- so many percent), as a confidence interval (the narrower the interval, the more precise the estimate), or as a significance level on a hypothesis test (whether or not the finding is reliable or could be expected by chance). Without this additional information, the reader does not know whether an apparent impact reflects changes in the underlying behavior or merely variability in the data or model.

Our analysis focuses on smoking outcome measures for the entire target population rather than for program participants alone. For example, we measure changes in smoking rates for all adults in Arkansas rather than for a group who participated in a particular education or cessation program. In many cases the target population is restricted to a particular demographic group (e.g.,youth) or a specific geographic region (e.g., the Delta), but in all cases we measure outcomes for that entire target population, and not for a specific group of program participants.

There are several reasons for this approach. First, some program components, either alone or in combination with other program components that have similar goals, have sufficient size that an impact should be measurable at a population level. In such a case, it is important to demonstrate that the program affects a broad segment of the population. Second, some components, such as media campaigns and other educational outreach efforts do not have participants *per se,* but are targeted at everyone in a particular population. Third, many programs have an impact that extends beyond the immediate participants. For example, programs that attempt to change the behavior of program participants through education can affect the behavior and health outcomes of other people who are in contact with the immediate participants. Finally, and perhaps most importantly from an evaluation standpoint, it is very difficult to distinguish between pre-program tendencies and the impact of the program under study if only outcomes for program participants are considered. The people who participate in a specific program frequently are the most motivated individuals in the population, and many would improve their outcomes even without participating in the program.

Only through comparison to a control group or through careful statistical modeling is it possible to determine whether the outcomes for a group of program participants are due to the program or simply reflect a high level of motivation on the part of program enrollees. Creating a randomized control group is neither cost-effective nor politically feasible. Collecting voluminous background information on participants to use in statistical modeling is also expensive and intrusive. Therefore, we focus our outcomes evaluation on programs that we judge to be sufficiently large to have a measurable impact on an identifiable target population and for which we have population outcome measures.

CHAPTER ORGANIZATION

This chapter is organized in a very similar fashion to the chapter in last year's report on smoking outcomes. However, there are some notable changes in content due to the availability of data sources. After a summary of the chapter highlights, the chapter presents the following information:

Adult Smoking

As we did last year, we analyze trends in the percentage of adults who smoke and trends in cigarette sales. In new sections, we compare Arkansas trends in smoking, cigarette taxes and tobacco control spending to those in the states surrounding Arkansas. We also provide additional information about changes in the number of cigarettes consumed per smoker using a newly available data set, the Arkansas Adult Tobacco Survey (AATS).

Youth Smoking

The primary source of information on youth smoking, the Youth Risk Behavior Surveillance System (YRBSS) is only conducted in alternate years and we therefore do not have new information from this source. However, we update our analysis of smoking by pregnant teenagers and by young adults, as well as our analysis of illegal sales of cigarettes to minors.

Attitudes toward Smoking

We provide a new section on the changes in attitudes toward smoking and smoking regulations using the 2000 and 2004 waves of the Arkansas Tobacco Survey.

Geographic Analysis

We update our analysis of the distribution of Department of Health tobacco control spending and activities among Arkansas counties and the relationship with county-specific smoking trends.

STATEWIDE TRENDS IN SMOKING BEHAVIORS

In this section, we examine statewide trends in smoking behaviors and assess the extent to which there have been any changes in those trends since the inception of the programs supported by the Tobacco Settlement funds. Our approach is guided by the conceptual model presented in Figure 10.1, which defines a continuum over time of outcomes that should occur in response to educational and treatment interventions to reduce smoking rates.

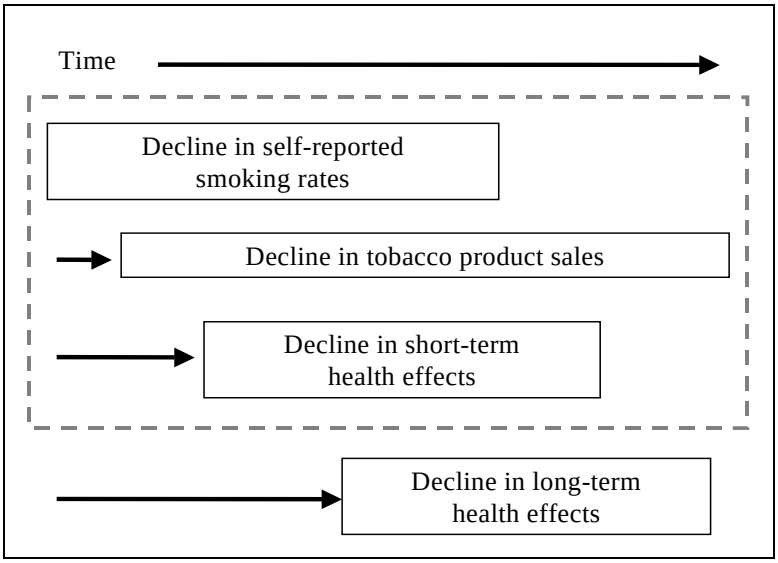


Figure 10.1 Conceptual Model of Behavioral Responses for Smoking Cessation

According to this model, the first outcome we would expect to observe is a decline in self-reported smoking, which then should be followed by a decline in sales of tobacco products. As smoking rates decrease, we then should see reductions in short-term health effects of smoking, such as low birth weight infants or hospital stays due to asthma exacerbations. Finally, effects on longer-term health status will occur later, for example, in reduced incidence of cancers or heart disease.

Because the Tobacco Settlement programs are still relatively new, we focus our analysis on the earliest outcomes that are expected to be observed. These include self-reported smoking rates by adults and youth, sales of cigarette products, and compliance rates with prohibitions on sales of tobacco products to youth.

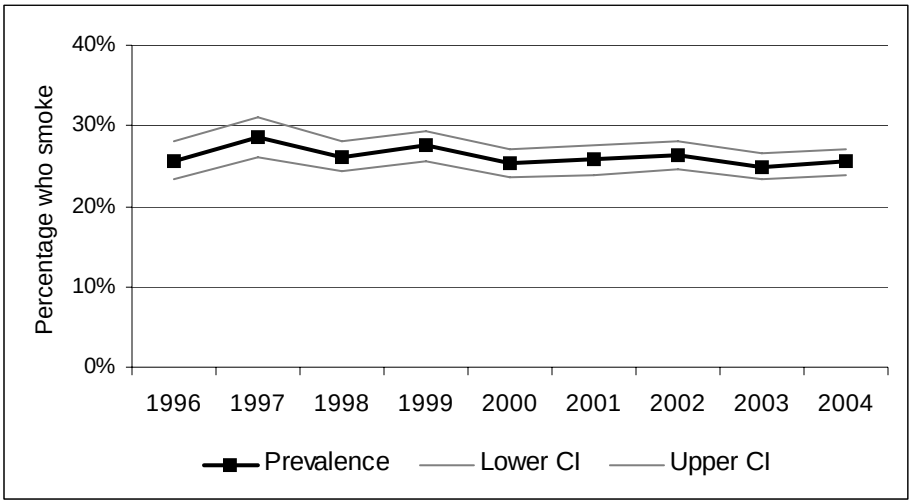
The most common measure of smoking behavior is the prevalence of adult smoking as measured by the Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is an annual telephone survey of randomly selected adults throughout the country that is coordinated by the

U.S. Department of Health and Human Services Centers for Disease Control and Prevention (CDC). The precision of the information available from this survey depends on the number of people who are surveyed. The sample size in Arkansas has ranged from less than 2000 in 1995 to more than 4000 in 2004, so precision has increased.

Percentage of Adults who Smoke

Key finding: The adult smoking rate has not fallen as much as would be expected if Arkansas was following the successful patterns of other states with comprehensive tobacco control programs.

Figure 10.2 reports the estimated percentages of adults in Arkansas who reported they smoked, for each year from 1996 through 2004, based on the BRFSS survey data. These rates are the percentage of adult Arkansans who reported that they smoke "everyday" or "some days" in response to the survey question, "Do you now smoke cigarettes everyday, some days, or not at all?" We also report the upper and lower limits of the 95 percent confidence intervals for these estimates.[9] As the graph illustrates, the prevalence of smoking has moved up and down within a narrow range over these years, with no apparent downward trend. As shown by the confidence intervals, estimates from year to year are not so different that they fall outside of the confidence intervals of previous years' estimates. Therefore, differences are likely due to error caused by the manner in which people were sampled rather than real changes in the percentages of the population who smoke.

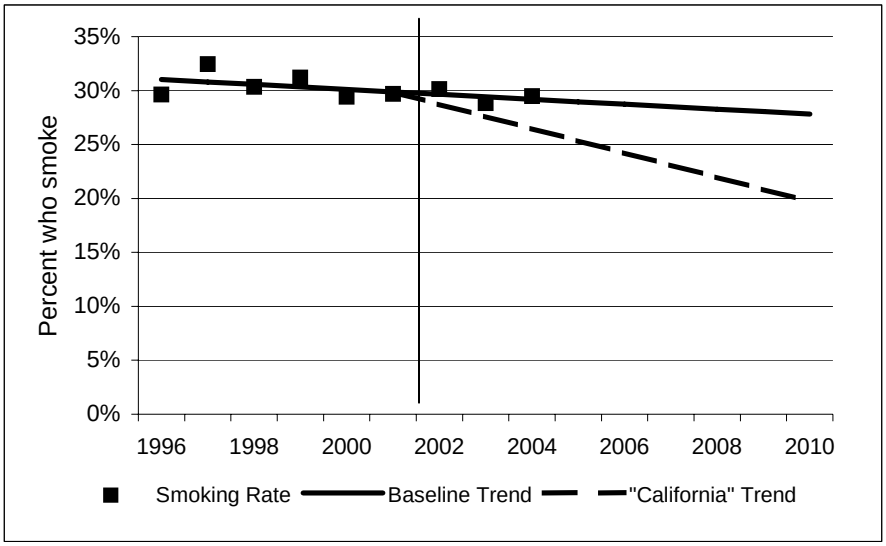


Source: RAND analysis of Behavioral Risk Factor Surveillance System micro data files

Figure 10.2 Percentage of Adults in Arkansas who Smoke, 1996 through 2004

[9] These confidence intervals define a range within which estimated values would fall 95 percent of the time for survey samples if the survey were repeated over and over again, that is, where there is 95 percent confidence that the true value lies within that range. Estimates with wider confidence intervals must be interpreted with caution because apparent differences in values might not be statistically significant.

One goal of the outcome evaluation is to answer the question: *"How do changes in smoking rates since the beginning of Tobacco Settlement programming compare to what would have happened to smoking rates if these programs had not been established?"* Appendix A describes the methods that we use to answer this question. The results are presented in Figure 10.3. We find that the adjusted smoking rate in 2004 was virtually identical to the smoking rate that would be expected if the baseline trend had continued. We cannot detect an impact of the ADH smoking programs in the adult population.



Source: RAND analysis of Behavioral Risk Factor Surveillance System micro data files

Figure 10.3 Percentage of Adults Age 18 and Over in Arkansas who Smoke, Adjusted for Changes in Survey Sample Demographic Characteristics

We also include a hypothetical trend that indicates what the predicted smoking rates would be if Arkansas' anti-smoking programs and policies are as successful as those in California, one of the most successful state-wide tobacco control programs in the US to date. California experienced a 0.9 percent acceleration in its downward smoking trend during the first ten years of its program.[10] We include this line to provide a prediction of the impact that can be expected from a successful program. The impact is very small in the first few years, but the cumulative effect will cut smoking rates by almost one-third after ten years.

As time passes, the increased spread between the lines improves our ability to determine whether Arkansas is continuing pre-program trends or is recognizing gains from its new programs. In 2003, the adjusted smoking rate lay between the two trends and it was not possible to determine which path Arkansas was on. In 2004, however, the smoking rate line is

[10] Adult Smoking Trends in California, California Department of Health Services, http://www.dhs.ca.gov/ps/cdic/ccb/tcs/documents/FSAdulttrends.pdf

sufficiently different from the "California Trend" that we can state with 95 percent confidence that Arkansas currently is not following this successful pattern.

We also analyzed survey information about smoking prevalence from the Arkansas Adult Tobacco Survey conducted by the Center for Health Statistics of Arkansas Department of Health. These data indicate that the adjusted smoking rate among adults dropped from 26.3 percent in 2002 to 24.4 percent in 2004. The difference was statistically significant. In contrast to the BRFSS, this survey suggests that the recent decline in smoking exceeds what would be expected from a successful tobacco control program.

This difference between the BRFSS and AATS is a concern, since both surveys are attempting to estimate the same underlying rate of smoking in the population. In 2002, the two surveys yield virtually equal estimates of adult smoking prevalence, but in 2004 the AATS estimate is much lower. As discussed below, the pattern shown by the AATS conflict with evidence from other sources as well, so we conclude that the trends described by the BRFSS are more likely to be correct.[11]

Amount of Cigarette Consumption Per Adult Arkansan

Key Finding: Cigarette sales continued a downward trend that had begun before the recent tax increases and the start of the Tobacco Settlement programs. This trend could mean that smokers are smoking less now, on average, or it could reflect increased transport into Arkansas of cigarettes purchased out of state in response to the tax increases.

The amount of cigarettes consumed can be measured in two ways. First, information on cigarette sales can be used to calculate consumption rates. We used the total state adult population as the denominator for the smoking rate, which we measured as the population over age 15. Second, people can be asked how much they smoke using surveys such as the AATS and BRFSS. Although the BRFSS stopped asking this question in 2000, the AATS asked for this information in 2002 and 2004.

Figure 10.4 shows that the average amount of cigarette consumption per capita has been declining since 1998. The individual points on the graph are the cigarette sales per capita for each month. The vertical lines on the graph identify the two dates that the state excise tax increases went into effect. Using these cigarette consumption data points for the pre-tax increase period of January 1998 through June 2001, we estimated a baseline trend line of cigarette consumption per capita. This trend line, when projected into future time periods, is an estimate of what cigarette consumption would have been in subsequent years if the baseline trends had continued without the introduction of tax changes or tobacco prevention and cessation interventions.

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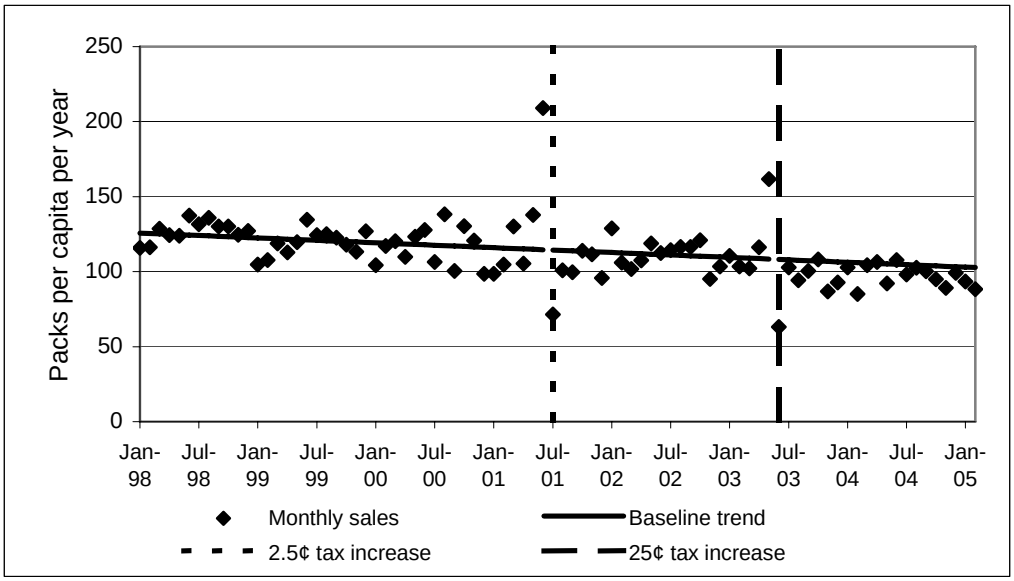
[11] We consulted with the Director of the Arkansas Department of Health Center for Health Statistics, about the difference between the AATS and BRFSS estimates. He told us that he was aware of the issue and that similar results had been found in other states (Ramsey LT, Pelletier A, Knight S. Differences in smoking prevalence between the Adult Tobacco Survey and the Behavioral Risk Factor Surveillance System [letter to the editor]. Prev Chronic Dis [serial online] 2004 Oct [date cited]. Available from: URL:http://www.cdc.gov/pcd/issues/2004/oct/04_0056.htm.). He thinks that Arkansas tobacco control efforts have made smokers less inclined to respond to a survey such as the AATS that focuses on tobacco, leading to an unanticipated bias toward non-smokers in the sampling process in 2004.



Source: RAND analysis of monthly tax receipts (provided by Office of Excise Tax Administration, Arkansas Department of Finance) and population estimates from the U.S. Census Bureau. Monthly figures are multiplied by 12 to correspond to an annual consumption rate.

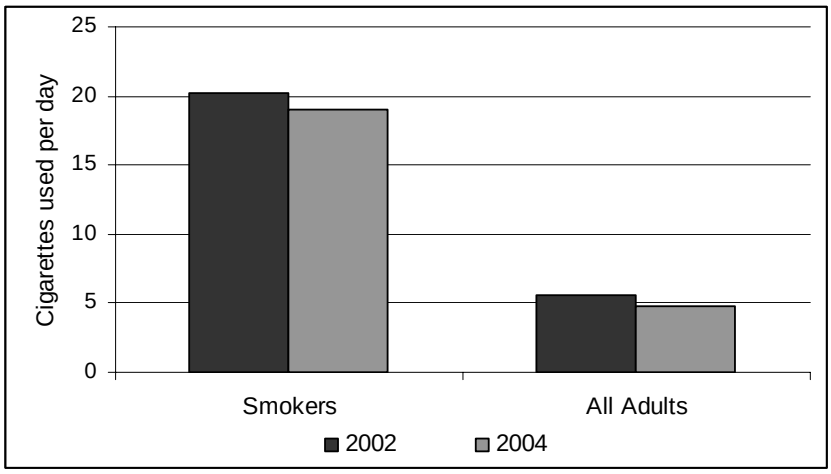
Figure 10.4 Number of Packs of Cigarettes Sold per Arkansan, Age Fifteen and Older

The trend line, which is shown as the declining straight line on the graph, represents an average 3 percent decline in cigarette consumption per capita each year. Taxes increased from 31.5 cents per pack to 34 cents per pack in July 2001 and to 59 cents per pack in June 2003. Consumption data are the points plotted on the graph for each month. As can be seen by comparing the points of actual data to the trend line, our analysis did not find any change in the trend as the tobacco prevention and cessation activities began operation in 2002. The trend remained nearly constant overall, despite some short-term increases in sales just before (and subsequent short-term decline in sales immediately following) the enactment of higher taxes in 2001 and again in 2003.

In last year's report, we noted that following the June 2003 increase, many of the monthly sales fell below the projected trend, but this downward deviation was not sufficiently large to indicate a significant change in the trend. Sales in the past year have continued to follow this pattern, but they remain only slightly below the projected baseline trend – not low enough to conclude that the baseline trend is no longer being followed.

The AATS asks all smokers how many cigarettes they consume in an average day. Figure 10.5 reports their findings for 2002 and 2004. The left side of the figure presents the average cigarette consumption for smokers and the right side presents the average cigarette consumption spread over all adults (i.e. averaging consumption of zero for non-smokers with the reported consumption for smokers). The numbers on the right side, when converted to packs per person per year, are relatively close to the sales numbers reported in Figure 10.4. In 2002, 5.53 cigarettes per person per day is equivalent to 101 packs per person per year, and in 2004, 4.83 cigarettes per day is equivalent to 88 packs per year.

The AATS numbers correspond to a 6.3 percent annual decline in per capita cigarette consumption. This is over twice the rate of decline indicated by the sales figures. Since we believe that the sales figures might overstate decreases in smoking because they do not include cigarettes illicitly imported from neighboring states where cigarettes are less expensive due to lower excise taxes, this discrepancy leads us to believe that the AATS is likely overstating the decrease in smoking.



Source: Arkansas Adult Tobacco Survey 2002 and 2004

Figure 10.5 Daily Cigarette Usage among Adult Arkansan, Adjusted for Changes in Survey Sample Demographic Characteristics

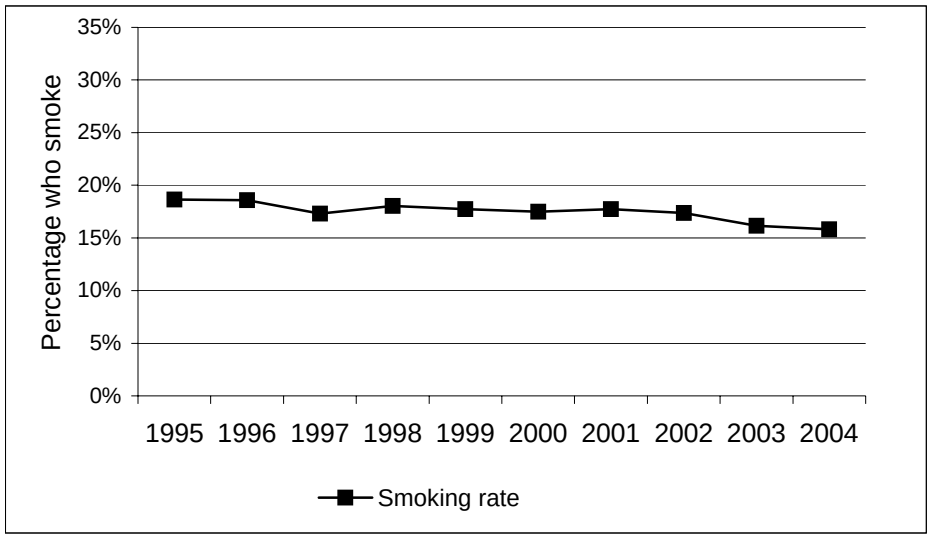
Percentage of Pregnant Women who Smoke

Key Finding: In 2004, the percentage of pregnant women who reported they smoked continues to be less than expected from baseline trends of smoking prevalence.

The subpopulation of pregnant women is of interest for evaluation purposes because smoking poses great medical risks during pregnancy, especially to the fetus. Furthermore, good data are available to analyze smoking patterns because every woman who delivers a child is asked whether she smoked during the pregnancy. Since pregnant women are exposed to many of the same programming influences as the general population (e.g., education, media campaigns), the information collected about their behavior can be used to provide insights on smoking outcomes that are unobtainable from the more limited data on the general population. However, one must be cautious about generalizing too casually from the population of pregnant women to the general population.

Figure 10.6 shows for each year from 1995 through 2004 the percentage of pregnant women who smoked during pregnancy, based on information reported on the application for a birth certificate. The annual rates show a slight downward trend in the percentage of pregnant women who smoke from the mid-1990s through 2004. These numbers do not contain sampling error because they are the actual prevalence rates for everyone in this group. Therefore, no

confidence intervals are needed to indicate the precision of the information, which would be necessary if the data had come from a random sample.

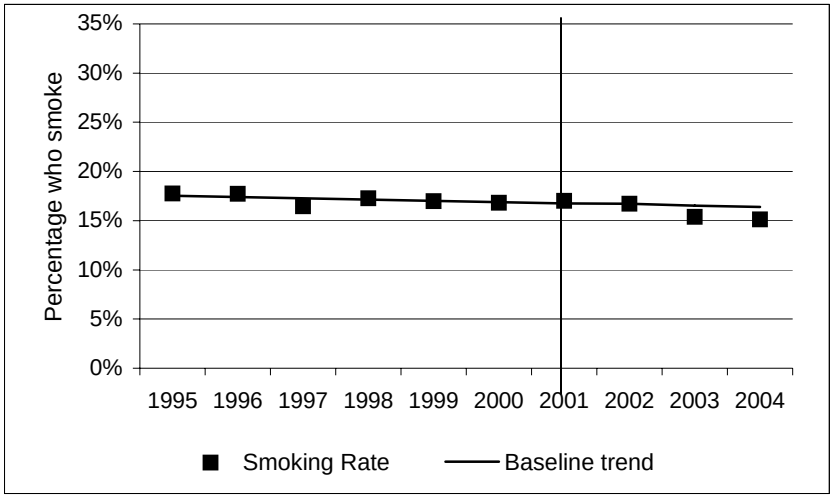


Source: RAND analysis of Birth Certificate micro data files

Figure 10.6 Percentage of Pregnant Women in Arkansas who Smoke, 1995 through 2004

As discussed above for the prevalence of adult smokers, observed changes over time in the percentage of pregnant women who smoke could be explained simply by changes in their demographics, rather than by changes in smoking behaviors. Therefore, we estimated a baseline trend in smoking prevalence before the Tobacco Settlement programs began, adjusting for changes in demographics. This trend line is extended through the later period to provide an estimate of what the smoking rate would have been if that trend had continued.

Figure 10.7 presents the adjusted prevalence rates and the estimated baseline trend, which indicates that smoking prevalence among pregnant women has been decreasing, albeit very slowly. Over the six-year baseline period, smoking decreased approximately one percentage point, which is equivalent to a reduction in smoking of one percent per year. This trend of declining prevalence is statistically significant. Comparing this trend (indicated by the trend line in Figure 10.7) to prevalence rates (indicated by the points in Figure 10.7) during the period that Tobacco Settlement programs were in operation, we find that smoking by pregnant women was virtually identical to the expected rate in 2002 and slightly below the expected rate in 2003 and 2004. These lower rates are slightly more than one percentage point below the trend and are statistically significant.



Source: RAND analysis of Birth Certificate micro data files

Figure 10.7 Adjusted Pregnant Women Smoking Prevalence in Arkansas, Adjusted for Demographic Changes, 1995 through 2004

Percentage of Youth who Smoke

Key Finding: Separate analyses indicate that the percentage of smokers among both young adults (age 18 to 25) and teen mothers (age 11 to 18) have declined below the baseline trend of declining rates since the Tobacco Settlement programs have been in operation.

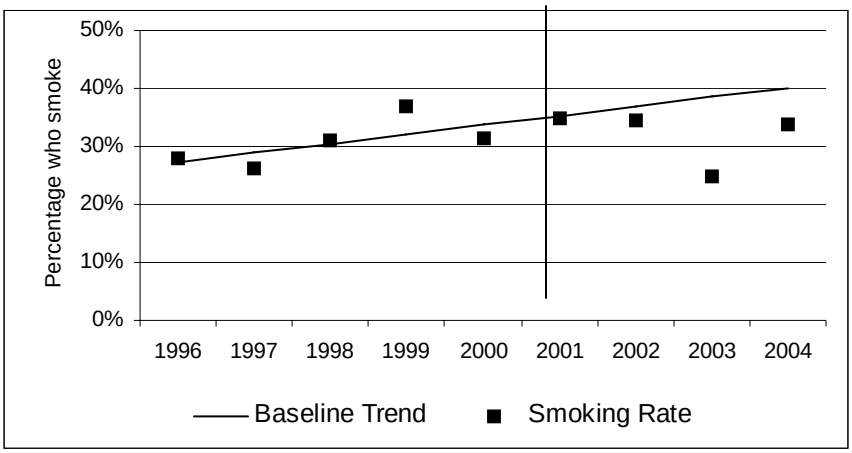
Last year, we reported on smoking trends among youth in Arkansas using the Youth Risk Behavior Surveillance System (YRBSS). That survey is only collected every other year, so we do not have any new results to present regarding smoking behavior among the general population of Arkansas teenagers.

However, we were able to examine the prevalence of smokers in young populations using two other data sources. We used a subset of the BRFSS sample to analyze smoking rates for the youngest age group of adults, those age 18 to 25 years. In addition, we used birth certificate data to analyze smoking for pregnant teenagers of the ages 14 to 19 years.

The estimated baseline trend for young adults and deviations from what would be expected if that trend were to continue are presented in Figure 10.8. Again, the vertical line on the graph signifies the start of the Tobacco Settlement programs. The trend line shows that the percentage of young adults who smoked increased over time during the baseline period from 1996 through 2001. We extrapolated this trend to later years, comparing it to the prevalence of young adult smokers reported in the BRFSS data for those years (represented by the square points).

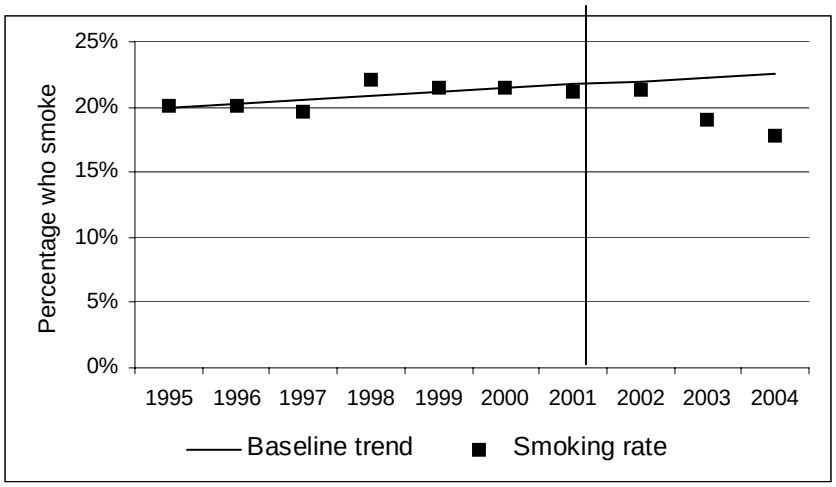
We reported last year that the smoking rate for the youngest adult age group in 2003 was 14 percentage points lower than would be expected based on the baseline trends. This is a very large drop and probably reflects the imprecision caused by using a relatively small sample of young adults. The estimate for 2004 is approximately 6 percentage points below the baseline trend. Taken as a group, the three years of smoking rates following program initiation in 2001 indicate a significant decline in smoking for young adults from the baseline trend.

The results of a similar analysis for pregnant teenagers are presented in Figure 10.9. The baseline trend line shows that the percentage of pregnant teenagers who smoked also increased over time during the baseline period, at a predicted rate of approximately three tenths of a percentage point each year. Extrapolating this trend into later years, we estimated that the reported smoking rate for pregnant teenagers in 2004 (represented by the square points) was almost five percentage points below the rate that would be predicted based on the baseline trend, a difference that is large and statistically significant.



Source: RAND analysis of Behavioral Risk Factor Surveillance System micro data files

Figure 10.8 Adjusted Prevalence of Smokers for Young Adults in Arkansas, adjusted for demographic changes, Ages 18 through 25, 1996 through 2004



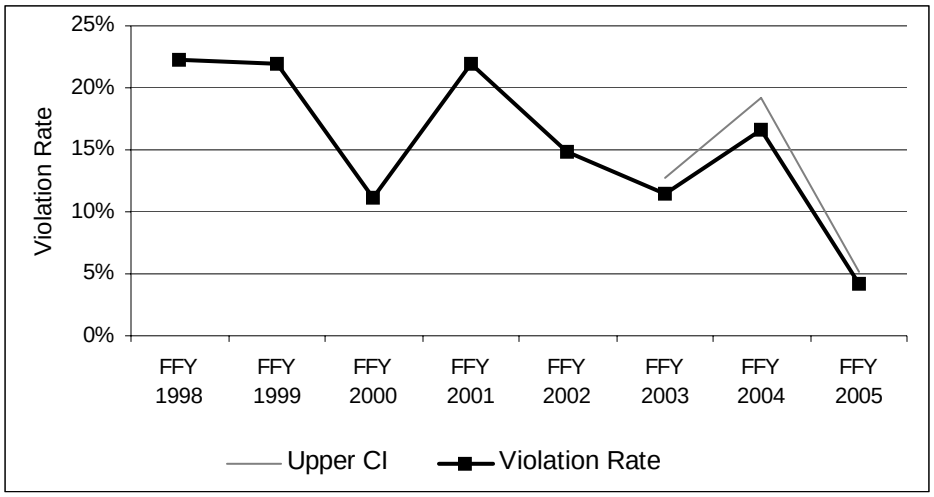
Source: RAND analysis of Birth Certificate micro data files

Figure 10.9 Adjusted Prevalence of Smokers for Pregnant Teens in Arkansas, adjusted for demographic changes, Ages 14 through 19, 1995 through 2004

Enforcement of Laws Forbidding Sales of Tobacco Products to Minors

Key Finding: Rates of violation of laws forbidding sales to minors have declined dramatically in the past year.

Another measure of the effectiveness of educational and outreach efforts by the Tobacco Settlement programs is the trend in compliance with laws that forbid the sale of tobacco products to minors. The Synar data record the compliance of merchants as measured by inspections carried out by undercover underage purchasers. These inspections are carried out at randomly selected stores, with the goal of providing an unbiased estimate of the compliance rate among merchants within the state. Figure 10.10 provides the violation rate from federal FY (FFY) 1997 through FFY 2005.[12]



Notes: Inspections occur during the summer of the preceding calendar year. For example, FY 2004 violation rate is calculated from inspections primarily conducted during May and June, 2003.

Sources: US Department of Health and Human Services, Substance Abuse and Mental Health Services Administration (SAMHSA) web site, and the Arkansas Annual Synar Reports for FFY 2003, 2004, and 2005. [13]

Figure 10.10 Compliance Rates for Not Selling Tobacco Products to Minors, FFY 1997 through FFY 2005

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[12] The state reports its Synar data to the federal government by federal fiscal years. Therefore, we also use federal fiscal year in presenting results of our analyses of the Synar data; all other analyses are reported by Arkansas fiscal year.

[13] The SAMHSA website is http://prevention.samhsa.gov/tobacco/01synartable.asp, and the Synar reports are on http://www.state.ar.us/dhs/dmhs/2003%20Annual%20Synar%20Report.doc, http://www.state.ar.us/dhs/dmhs/2004%20Annual%20Synar%20Report.doc and http://www.arkansas.gov/dhs/dmhs/FFY2005ASRfinal%2010%2027%2004.pdf.

The results of the Synar inspections have produced violation rates that vary widely from year to year. Confidence intervals, important measures of precision of the data, are only available for the last three years of the series, but they suggest that the variation in the violation rates cannot be attributed to the margin of error due to random sampling.

Figure 10.10 shows a dramatic drop in the violation rate from over 15 percent last year to under 5 percent this year. Furthermore, the data collection and analysis methods remained virtually unchanged between the two years, allowing us to conclude that this drop represents a real decrease in the violation rate in the past year. This finding differs from what we stated in our 2004 report, which identified that much of the variation in earlier years appeared to be due to changes in data collection methods, making it difficult to determine whether there had been changes in compliance with the law.

Attitudes Toward Smoking

The 2002 and 2004 AATS includes a number of questions regarding exposure to second hand smoke and beliefs about smoking and smoking regulation. However, as described above, we are concerned that the 2004 AATS sample was biased toward higher rates of non-smokers, and this bias may also exist in observed attitudes toward smoking. Therefore, although we review the AATS findings here as another information source, we urge caution in drawing conclusions based solely on this information.

The AATS questions show a consistent pattern of a decrease in exposure to second hand smoke and an increase in beliefs that smoking should be restricted. Survey respondents reported a drop from 2002 to 2004 in exposure to second hand smoke at home (33.0 percent to 28.8 percent) and at work (14.1 percent to 10.2 percent). In 2002, slightly more than 40 percent of homes allowed smoking. This dropped to approximately 35 percent in 2004. The number of workplaces that did not have an official policy banning smoking also dropped from slightly more than 40 percent to 35 percent.[14] Compared with 2002, more adults in 2004 agreed that smoking should not be allowed in indoor restaurants, public buildings, shopping malls, and sports and concerts events. In particular, the vast majority of adults thought that smoking should not be allowed in day care centers. The percent who supported laws for smoke-free restaurants increased from 57 percent to 60 percent.

AATS findings for knowledge of smoking consequences were mixed. The majority of adults recognized the harm caused by second-hand smoking (88.9 percent in 2002 versus 90.5 percent in 2004, but a relatively low percentage considered it beneficial to quit for those who have smoked for more than 20 years (19.7 percent in 2002 versus 19.5 percent in 2004). Also, these factors remained fairly constant over the four-year period.

[14] Another source on workplace smoking policies is a supplement to the Current Population Survey that was been conducted four times between 1992 and 2004. If conducted again, this supplement will provide valuable information about changes after program implementation. See Bourne, DM, Shopland, DR, Anderson, CM and Burns, DM. (2004) *Occupational disparities in smoke-free workplace policies in Arkansas.* 101(5) 148-54.

COMPARISON TO SMOKING PATTERNS OF NEIGHBORING STATES

One of the ways to assess the effect of Tobacco Settlement spending for tobacco control on smoking prevalence is to compare Arkansas smoking rates to those of surrounding states to account for other factors that affect smoking. The surrounding states considered are the six states that share a border with Arkansas – Louisiana, Mississippi, Missouri, Oklahoma, Tennessee, and Texas. In Figure 10.11, we graph the smoking prevalence of adults and young adults, tax rates on tobacco products, and spending on tobacco control in Arkansas and the surrounding states. As discussed in Appendix A, prevalence rates have been adjusted for differences in the age, race and gender composition of the state populations. Tax and spending graphs are in constant (2003) dollars, i.e. are adjusted for inflation. Averages for surrounding states are weighted by population. See Appendix C for state-by-state graphs of these measures.

There is a slight downward trend in smoking in Arkansas and a slight upward trend in the surrounding states, but neither trend is statistically significant. The surrounding states show a "U" shaped pattern that is significant and not apparent in Arkansas. In the surrounding states, smoking decreased in the late 1990s but then increased in the first few years of the 2000s. In 2004 the surrounding states showed a drop in smoking whereas Arkansas did not.

The second panel of Figure 10.11 shows that smoking for young adults remains slightly higher in Arkansas than in the surrounding states. Compared with other states in the region, Arkansas is experiencing slightly less growth in young adult smoking.

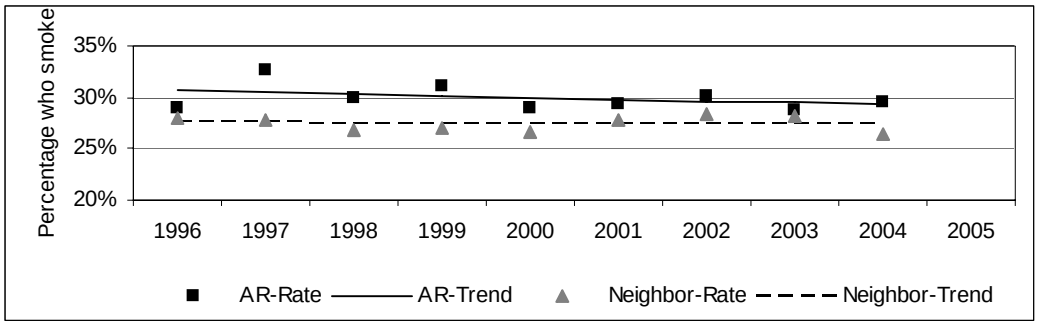
The bottom two panels of Figure 10.11 show what was happening with cigarette taxes and tobacco control spending in Arkansas and surrounding states during this interval. As smoking was increasing since 2000 in surrounding states, tobacco control spending and cigarette taxes were steady or declining slightly. In Arkansas, smoking stayed relatively steady as tobacco control spending increased sharply in 2001 and cigarette taxes almost doubled in 2003. It is possible that smoking in Arkansas would have remained the same or increased during the early 2000s, if increases in cigarette taxes and tobacco control spending had not been implemented for the state. As an effect of these actions, which the surrounding states have not taken, in the next few years we should begin to see Arkansas rates drop below those of the other states.

GEOGRAPHIC ANALYSES FOR ADH PROGRAM OUTCOMES

Key Finding: ADH activity has been distributed throughout the state, with some areas receiving substantially more services than others. At this point, there is no evidence that areas with greater ADH activity are experiencing greater decreases in smoking than areas with less ADH activity.

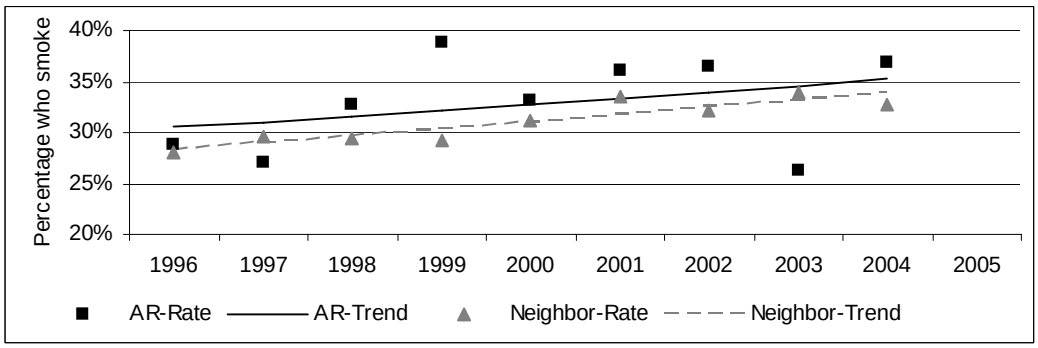
The previous analysis examines trends in overall smoking rates across the state for various population groups, and it tests whether changes in rates of tobacco use are associated with the introduction of the programs supported by the Tobacco Settlement funds. In this section, we examine whether geographic variations in smoking trends and other outcomes are related to geographical patterns of the interventions implemented by the ADH Tobacco Prevention and Cessation program. Due to the short amount of time since the introduction of the Tobacco Settlement funds, we do not expect to find large effects. However, this analysis is tailored to finding local program impacts that might be masked in the statewide data, and it will be an important component of the outcomes analysis in future years.

Adult smoking prevalence



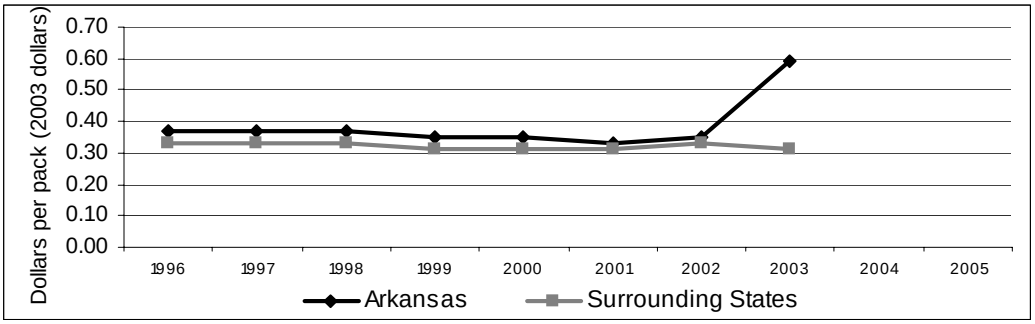
Source: Adult smoking prevalence: BRFSS

Young adult smoking prevalence, ages 18 through 25



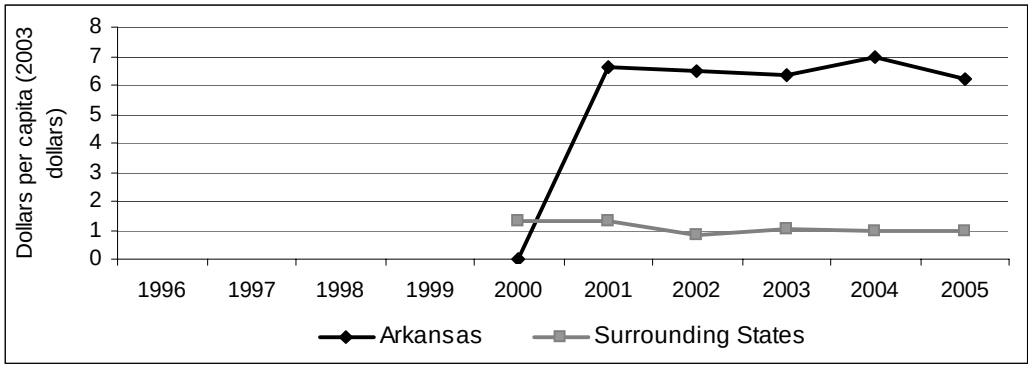
Source: Adult smoking prevalence: BRFSS

Cigarette tax rates



Source: http://apps.nccd.cdc.gov/statesystem/StateSystem.aspx?SelectedTopic=300&ucName=UCTimeTrend&dir=epi_report

Spending on tobacco control



Source: http://tobaccofreekids.org/research/factsheets/pdf/0209.pdf

Figure 10.11 Smoking Prevalence, Cigarette Taxes, and Tobacco Control Spending in Arkansas and Surrounding States

Using programming information provided by the ADH, along with data on smoking behaviors from the BRFSS and birth certificates, we examined county-level associations between levels of program effort and changes in smoking for county residents. In addition to the county level analysis, we also aggregate programming effort to the regional level, using the Area Health Education Center (AHEC) regions of the state, which are listed in Table 10.2. We do this analysis to capture any impact of programming activities beyond the borders of the county in which an activity is centered. The data and methods are described in Appendix A.

We begin by estimating baseline smoking trends at the county level and the extent to which the ADH program targeted its tobacco prevention and cessation activities to counties with high or increasing smoking baseline rates. We then examine whether there is a change in county-level smoking trends after the ADH programming begins, and whether the change in the trend is related to the amount of programming activity. Our hypothesis is that counties with more programming activity will have greater reductions in smoking rates.

Table 10.2 Arkansas Counties by AHEC Region

Region 1 Delta	Region 2 Pine Bluff	Region 3 S. Arkansas	Region 4 Southwest
Chicot	Arkansas	Ashley	Clark
Crittenden	Cleveland	Bradley	Hempstead
Desha	Drew	Calhoun	Howard
Lee	Garland	Columbia	Lafayette
Monroe	Grant	Dallas	Little River
Phillips	Hot Spring	Ouachita	Miller
St. Francis	Jefferson	Union	Nevada
	Lincoln		Pike
	Lonoke		Sevier
	Prairie		
	Saline		
Region 5 Fort Smith	**Region 6 Northwest**	**Region 7 Northeast**	**Region 8 Pulaski**
Conway	Baxter	Clay	Pulaski
Crawford	Benton	Cleburne	
Faulkner	Boone	Craighead	
Franklin	Carroll	Cross	
Johnson	Izard	Fulton	
Logan	Madison	Greene	
Montgomery	Marion	Independence	
Perry	Newton	Jackson	
Polk	Searcy	Lawrence	
Pope	Stone	Mississippi	
Scott	Washington	Poinsett	
Sebastian		Randolph	
Van Buren		Sharp	
Yell		White	
		Woodruff	

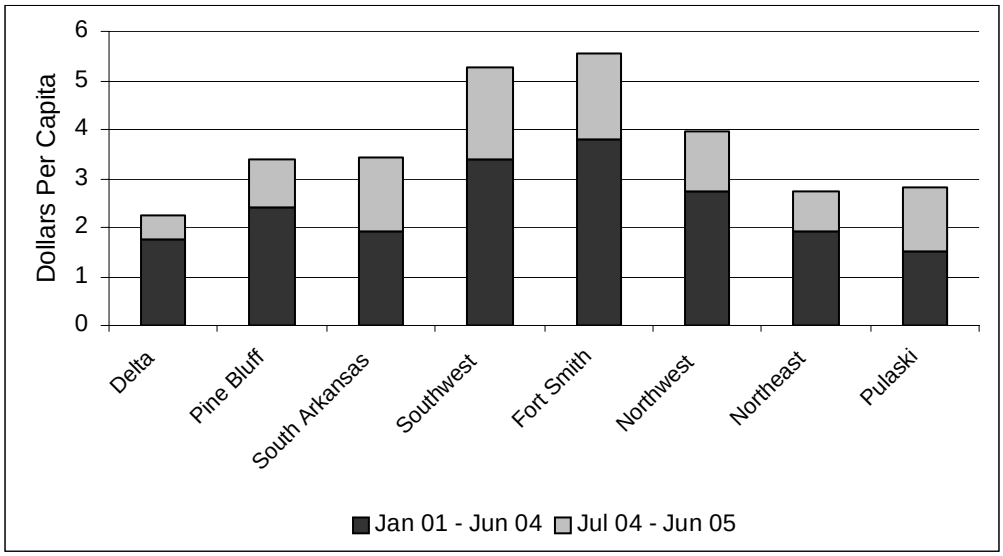
It would be good to have additional measures of programming, such as the quality of local programming and the unique challenges faced at the county and regional level. Likewise, it would be useful to have measures of other outcomes such as attitudes toward smoking. Unfortunately, such data are not available at this time. Although these additional data would provide more detailed information on the mechanisms through which the programming produces reductions in smoking, the analysis we present is adequate to determine whether there is a

relationship between resources and the ultimate outcome of smoking. These results should be interpreted in the context of the process evaluation information about the program activities presented in Chapter 3, to better understand the underlying mechanisms.

We estimated a separate outcome trend for each county based on the level of programming. Since displaying the results of all 75 Arkansas counties would be unwieldy, we predicted outcome trends for representative counties at two different levels of program activity, those with high and low spending on tobacco prevention and cessation interventions. Below we discuss all of the analyses, but provide graphical results only for those relationships that are statistically significant.

Community Grants, School Grants and Sponsorship Funding

Figure 10.12 presents the regional distribution of combined ADH per capita spending of the community, school and sponsorship programs from January 2001 through June 2005. We reported last year that spending through June of 2004 varied considerably across the regions. This pattern continues with per capita expenditures in the Fort Smith and Southwest regions approximately twice as high as in the Delta, Northeast or Pulaski regions. Analysis at the county level demonstrates that the variation among counties is even greater than before, now ranging from 21 cents per capita in the county with the lowest allocation to $13.16 in the county with the highest allocation.



Source: RAND analysis of data provided by Arkansas Department of Health and the Census Bureau

Figure 10.12 Spending per capita for the ADH Tobacco Prevention and Education Program Community Grants, School Grants, and Sponsorship Awards, January 2001 – June 2005

We estimated the impact of cumulative spending through June 2004 on the trend of smoking up through 2004. Our analysis assumed that any effect of the program spending occurs gradually and can be detected as a change in the trend of prevalence of smoking between the

baseline period and the 2002-2004 period of program operation. Our findings were very similar to those reported last year.

Smoking by general population. Using the BRFSS data on the percentage of smokers in the general adult population, we found no evidence of any geographic relationship between the amount of ADH spending and a change in the trend of smoking prevalence. This finding holds whether we measure spending at the region or at the county level. A similar analysis was performed on each of the community, school, and sponsorship components of ADH spending. This analysis also showed no relationships between program component spending levels and changes in smoking behavior.

Smoking by young adults. Relationships between program spending and smoking trends were analyzed in a similar way for the youngest adults in the BRFSS, those between age 18 and 25. Earlier we showed evidence that smoking rates for this age group were declining compared to the baseline trend, which was increasing (Figure 10.8). The geographic-specific analysis, however, did not find any relationship at either the county or regional level between smoking trends for this group and program spending. In other words, the statewide decline in smoking by young adults appears to be occurring in a way that is unrelated to local patterns of ADH spending on tobacco prevention and cessation activities.

Smoking by pregnant women. We used the birth certificate data to perform this same analysis on the smoking rates of pregnant women. Although the programs did not specifically target pregnant women, and some of their components focused on school children and other groups that have little overlap with pregnant women, we expect that the programs will influence community norms regarding smoking and have an indirect impact on smoking by pregnant women. Furthermore, the larger number of respondents in this data set makes it possible to estimate changes in trends for this subpopulation more precisely than for the general adult population.

As we reported last year, this analysis shows that the ADH spent more on programming in counties and regions where the baseline percentages of pregnant women who smoke were higher and were declining faster. This relationship between baseline county smoking rates and funding levels is statistically significant at the 0.01 level for both county spending and regional spending. This means that prior to Tobacco Settlement programming, the counties that received the most funding were already showing significant improvements.

These trends imply that the smoking rates were converging for counties with low and high funding levels before the start of Tobacco Settlement funding. Both smoking trends become significantly more negative following 2001, but we did not find a significant relationship between ADH spending and declines in smoking prevalence rates. In fact, the counties with low spending had a steeper decline than those with high spending, which is the opposite of the trend that would be expected for ADH program effects.

Tobacco Control Board Inspections

Another ADH programming activity is the inspection of merchants for compliance with laws prohibiting sales of cigarettes to minors. Unlike the Synar inspections that are randomly targeted in an attempt to evaluate compliance, the Tobacco Control Board inspections are targeted to areas with suspected low compliance or to merchants who have had a complaint filed

against them. One goal of these inspections is to reduce the violation rate and thereby reduce the smoking rate among minors in the targeted areas.

As documented in Figure 10.9, smoking among pregnant teenagers has decreased dramatically. As this is the only data we have on smoking by teenagers, we use this data source to assess whether the TCB inspections are at least in part responsible for the decrease in teen smoking. We examine the county-by-county patterns of when pregnant teenager smoking declined and when inspections occurred. This analytic strategy relies on the fact that inspections began in different years in different counties. Only 13 percent of the counties had merchant inspections in 2002, whereas in 2003 and 2004, 52 percent and 97 percent of counties had merchants who were inspected, respectively.

We assume that pregnant teenagers who gave birth in calendar year 2004 were most likely to be affected by inspections during fiscal year 2004, which ends in June 2004. We use multivariate analysis to control for the age and race of the pregnant teenager, for long-term smoking prevalence in the county, and for statewide annual smoking prevalence. We find no evidence that increased TCB inspections either in the current fiscal year or the in previous fiscal year are associated with a reduction in smoking by pregnant teenagers.

Arkansas Foundation for Medical Care (AFMC) Clinics

Fifteen counties in the state have AFMC cessation programs. We examined the BRFSS and birth certificate data to determine whether there were decreases in the percentage of smokers among residents of these counties following the initiation of the Tobacco Settlement programs. We excluded Pulaski County because the AFMC programs are all located outside of this densely populated county. Neither the BRFSS nor the birth certificate data showed any significant relationship between smoking trends on the presence of AFMC clinics. Last year we reported a small but statistically significant relationship between the presence of AFMC clinics and county smoking rates for pregnant women. Our failure to find a continuation of this relationship in the 2004 birth certificate data suggests that this relationship was spurious.

ANALYSIS OF SMOKING OUTCOMES IN THE DELTA REGION

Key Finding: Smoking among pregnant women in the Delta increased dramatically in 2004. We do not find any specific trend among the general population.

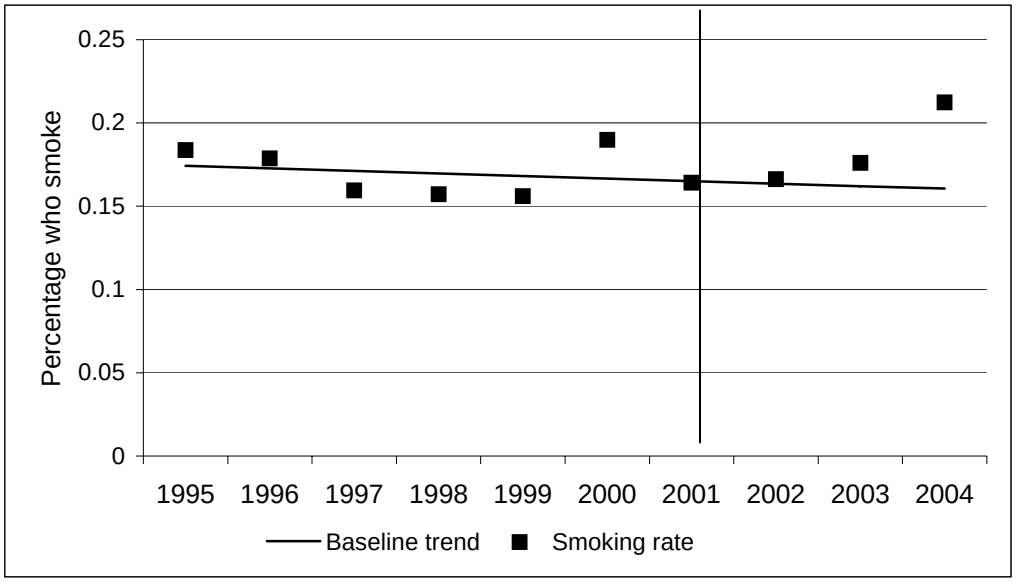
This outcomes analysis examines trends in smoking behavior for the Delta region, with the goal of assessing whether the combined efforts of several tobacco control programs in this region are affecting smoking behaviors. Although several funded programs are serving the Delta region, the Delta AHEC is the key funded program serving the area. As detailed in Chapter 5, the AHEC provides numerous health education and outreach programs including smoking programs. Several other Tobacco Settlement programs also serve the Delta region, including the Minority Health Initiative, the ADH Tobacco Prevention and Cessation program, and the Aging Initiative. Therefore, the results of some of our analyses reflect the combined effect of multiple program interventions in this region. We interpret each set of results carefully to ensure that any effects observed are attributed correctly to the program or programs with the most relevant programming.

We test for deviations from baseline trends in smoking rates, using the BRFSS data for the general adult population, examining the patterns for both the entire population and the youngest

adult cohort (age 18 to 25 years). We performed analyses at both the region and the county level. Because much of the Delta AHEC programming occurs in its centers in Helena, West Memphis and Lake Village, we also examined whether the three counties in which these centers are located have changes in their trends that differ from the rest of the region. We did not detect any systematic differences among the counties within the Delta, suggesting that any impact that the Delta AHEC programs might be having cannot be measured at the county level.

For all adult smoking rates, we reported last year that trends in smoking rates in the Delta region are very different from the state-level trends, and that smoking rates were declining after start of the Tobacco Settlement programs. In reaching that conclusion, we had assumed that the program effect could be measured as early as 2001. We have since realized that because the Tobacco Settlement programs were not operating at full capacity until early 2002, the earliest that smoking rates are likely to be affected by these programs would be in 2002. The smoking trends in the Delta showed that baseline smoking rates were increasing in the late 1990s and that smoking rates then leveled off or declined after 1999. With the start of full operation of the Tobacco Settlement programs not happening until 2002, we found different baseline trends, and any earlier reductions in smoking would be due to pre-program influences.

Our analysis of the smoking rates for pregnant women in the Delta also differs from last year. Last year, we found no significant evidence of any changes following program initiation. This year, we find a surprising increase in smoking rates among pregnant women in the Delta. This recent up-tick of almost five percentage points is statistically significant and is shown in Figure 10.13.



Source: RAND analysis of Behavioral Risk Factor Surveillance System micro data files

Figure 10.13 Percentage of Pregnant Women who Smoke, Arkansas Delta Region, Adjusted for Demographic Changes, 1996 through 2004

DISCUSSION

With another year of experience and data for the tobacco control activities supported by the Tobacco Settlement funds, we begin to see early trends in effects on smoking behaviors, attitudes, and related activities. Results remain mixed, however, with no evidence yet available for many of the measures. We expect that, with continued support of the statewide tobacco control activities as well as additional reinforcement through smoke-free environment legislation, additional progress can be made toward achieving the goal of healthy Arkansans.

Chapter 11
Evaluation of Non-smoking Outcomes

This chapter presents the existing and planned outcome measures for the programs receiving Tobacco Settlement funding. Five programs involve delivery of health-related services. Two of them – the ADH Tobacco Prevention and Cessation Program and the Medicaid Program Expansions – operate at the state level, so outcomes for these programs are measured at the state level. The remaining three programs – the Delta AHEC, Minority Health Initiative, and Arkansas Aging Initiative – provide services at the local or regional level. Therefore, outcome evaluations for these programs require analysis of primary data gathered on the *experience of their participants* as well as analysis of *secondary administrative and survey data* that describe the behaviors and health status of their entire target populations.

Two of the Tobacco Settlement programs – the College of Public Health and the Arkansas Biosciences Institute – are academic initiatives for which impacts on the health of Arkansans will occur far in the future. Thus, our evaluation of their effects will need to focus on intermediate outcomes that are stepping stones to that ultimate goal.

Impacts of the ADH program are smoking outcomes that are addressed in Chapter 10. This chapter presents our outcomes analysis for each of the other six programs. In the 2004 report, we analyzed the effect of portions of the Delta AHEC, Arkansas Aging Initiative, and Medicaid Expansion programs on the health status and health related behaviors of their target populations. Outcome measures are being newly developed for the MHI, COPH, and ABI. Taking each program in turn, we update outcome analyses performed last year for a program and also describe our plans for assessment of additional program-specific outcomes.

OUTCOMES FOR THE DELTA AHEC

Tobacco settlement funding to Delta AHEC supports many health education and training programs. When we began our outcomes evaluation in 2004, we examined the effect of Delta AHEC programming on teen pregnancy and on prenatal care. Although the tobacco settlement resources devoted by Delta AHEC to programs affecting these outcomes is relatively small, we chose to examine these outcomes because we thought it was possible that the programs might have an effect fairly quickly and because we were able to get good outcomes data. We update that analysis in this section. In addition, we describe plans for new outcomes evaluation for this program. If we can obtain useful data in future years, we believe that these additional outcomes will provide a much better indication of the comprehensive effect of Delta AHEC programming on the health of Delta residents. Refer to Chapter 10 for our analysis of whether smoking is decreasing faster in the Delta than elsewhere in the state in response to Delta AHEC tobacco prevention and cessation efforts.

Update of the Analysis of Teen Pregnancy Rates

Key Finding: We update the analysis of teen pregnancy rates by adding the 2004 data and by moving the expected beginning of program impact from 2001 to 2002. Although teen pregnancies have been decreasing throughout the state since 1995, we do not find any evidence that Delta AHEC programming accelerated this trend in the Delta.

One of the numerous health education and outreach programs provided by the Delta AHEC is a program to reduce teen pregnancies. Although several other Tobacco Settlement programs also serve the Delta region, none of them addresses teen pregnancy directly. Therefore, if there is a change in teen pregnancy rates that differs from changes elsewhere in the state, it could be interpreted with some confidence as being an effect of the Delta AHEC program.

In this analysis, we examine trends in teen pregnancy rates for the Delta region, with comparisons to the rates for the state. To calculate teen pregnancy rates, we used counts of pregnancies by county from the birth certificate data in conjunction with Census Bureau annual estimates of the number of female teenagers by county. We tested for deviations from baseline trends in this measure. We performed analyses at both the region and the county level. We tested for systematic differences among the counties within the Delta that might be the result of clustering of services around the AHEC's three office locations, but we did not find any differences related to office location. Therefore, the results we present compare changes in rates in the Delta as a whole to changes elsewhere in the state.

We analyzed the impact of the Delta AHEC's programming on teen pregnancy by calculating annual teen pregnancy rates for each county in the region from 1995 to 2004. These rates are calculated as the ratio of number of mothers in the birth certificate data, age 15 to 19, to the number of females in the same age range. The age range was restricted (omitting younger mothers) because the Census Bureau only publishes annual county population estimates for five year age ranges. Almost 98 percent of teen births are to mothers age 15 or older, so this restriction should not impair the analysis.

Using these county teen pregnancy rates, we estimated the baseline trend and the change in the trend when Tobacco Settlement programs began operation. Trends were estimated separately for the Delta region and for the rest of the state, with the results presented in Figure 11.1.

Both the Delta region and the rest of the state had similar downward trends in teen pregnancy rates during the baseline period. We consider the baseline period to run through 2001, to reflect the program's start-up in July of 2001. Our analysis allows the trend to change following 2001, but the data suggest that the trend remained virtually unchanged in both the Delta and other parts of the state. This finding of similarity between the trends in the Delta region and remainder of the state suggests that the drop in teen pregnancy in the Delta region was due to factors that existed throughout the state, rather than being a result of specific programming activities by the Delta AHEC.

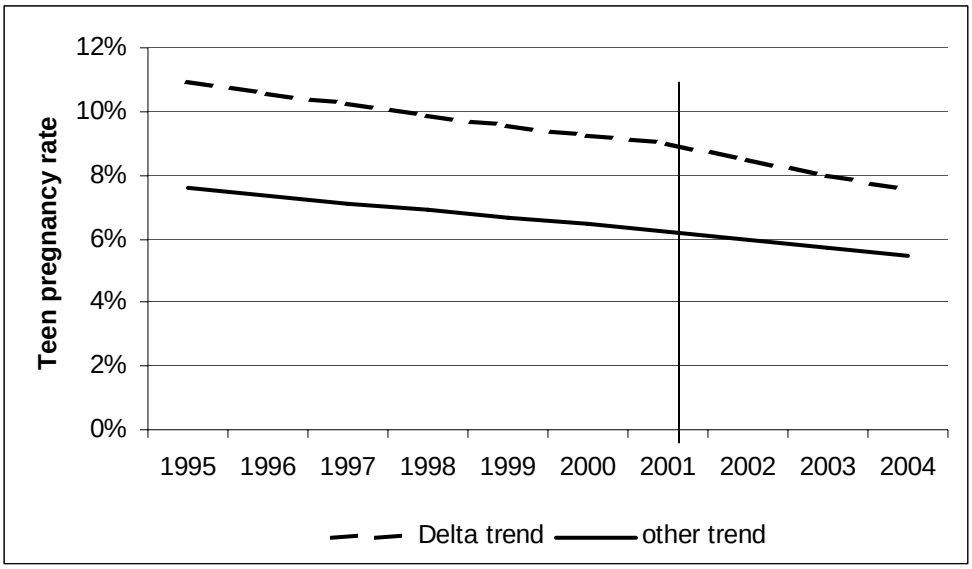


Figure 11.1 Teen Pregnancy Trends for the Delta Region and the Rest of the State, Ages 15-19, 1995 through 2004

Plans for Evaluating New Delta AHEC Outcomes

The community health education and health professional training activities provided by the Delta AHEC are intended to affect the health status of Delta residents by increasing the knowledge of residents and health professionals. Some of the activity, such as teaching adolescents about safe behavior, could have immediate results on measurable outcomes, such teen pregnancies. Other activity, such as providing Continuing Medical Education for Delta physicians, is likely to affect health status of residents in diffuse ways over a number of years, making its effect very difficult to measure. For efforts with long-term payoff, we focus on measuring intermediate outcomes that provide evidence of progress toward the primary goal of improved health for Arkansans.

Participant Data Collection and Analysis

As indicated in Chapter 5, the Delta AHEC is engaged in numerous education and training programs for residents and healthcare providers in the Delta. The Delta AHEC leadership and the UAMS faculty who are helping Delta AHEC with evaluation have informed us that each of these programs have measures in place to collect data on participants. Their plan is to automate data collection and management and to identify a core set of items that will be stored in a common database. They have not yet shared their existing data collection instruments with us, nor have we seen written plans for automation or construction of the core database. We believe automation and standardization of data from the programs can be useful, but we cannot evaluate their efforts without more information.

Since we currently do not have specific information to assess, we suggest that the Delta AHEC leadership and their evaluation consultants refer to our comments on the activities being undertaken by the Minority Health Initiative and Arkansas Aging Initiative. Since all three groups are providing education and service delivery to specific target populations and to health

care providers (AAI and Delta AHEC), we expect that our comments on the MHI and AAI activities will be useful to Delta AHEC. We close with some general recommendations that may be useful:

- Focus their participant data collection and evaluation efforts on the programs that are expending the largest share of their resources
- Include some questions about specific behaviors and behavioral changes along with demographic questions in their basic data collection
- Collect information at intake and at program completion
- Implement random sample surveys with post program follow-up for the most important programs to track behavior.
- Have their intake, exit and follow-up surveys as well as their plans for data management and analysis be reviewed by outside experts. We remain available to provide feedback at any time.

Administrative and Survey Data About the Target Population

Delta AHEC has recently implemented a diabetes education program. It started providing services in the first half of 2003 and increased its participation ten-fold by the end of 2004. It operates primarily out of the Helena Regional Medical Center in the central part of the Delta and the Crittenden Memorial Hospital in the northern part of the Delta. Based on research that has shown that hospitalizations for diabetes will decrease with increases in self-care for this chronic disease (see discussion and references above in the AAI section), we expect that this effort will decrease hospitalizations for diabetes. We plan to compare trends in hospitalization rates for diabetes in the counties served by these hospitals to trends elsewhere in the state. If Delta AHEC collects and provides data on the demographic characteristics (age, race, sex) of their participants, we can focus our analysis by comparing hospitalization trends for these demographic subpopulations with trends for similar populations elsewhere in the state.

OUTCOMES FOR THE MINORITY HEALTH INITIATIVE

The two main community interventions of the Minority Health Initiative are the Eating and Moving for Life Program and the Hypertension and Stroke Prevention and Education Program. Both of these programs are designed to improve the health status of Arkansans with respect to health conditions that are particularly prevalent in minority communities. We did not assess outcomes for the MHI in our previous report because we were focusing at that time on state-level outcomes. We describe here our plans for future outcomes analysis for the MHI programs using program-specific outcomes.

Participant Data Collection and Analysis

The Minority Health Initiative is currently moving into the second version of participant data collection protocols in both the Eating and Moving and Hypertension programs. In the following sections, we discuss the existing data collection efforts, their plans for improvement and our suggested analyses.

Eating and Moving for Life

This program operates in three counties. Its goal is to teach participants to improve their diet and increase their activity in order to decrease their own weight and blood pressure as well as that of their family. Each participant is expected to complete 16 sessions.

Since early in the program's history, the local staff has collected participant data on structured spreadsheets. For each session, these spreadsheets provide space to indicate the participant's attendance, race, sex, cholesterol, weight, blood pressure and glucose measures. An ID number identifies each participant. The MHI epidemiologist has provided us with copies of these spreadsheets. Visual inspection suggests that cholesterol and glucose are typically measured at the initial session and infrequently after that.

The layout of the spreadsheet makes it difficult, but not impossible, to read the data into standard statistical packages for further analysis. We have not undertaken this task due to our concerns about data quality. The epidemiologist confirmed that there had been problems with obtaining consistent information, both because of sporadic participation and sporadic data entry.

Currently, the MHI produces some summary information for participants in each of the three counties. They report the count of total enrollees by weight class (overweight, obese) and counts of how many had high cholesterol, blood pressure or blood sugar. For participants who complete, they report the number who improved their weight, blood pressure, who report regular exercise and the average weight loss.

We propose that the MHI produce the following additional information regarding outcomes, all of which could be completed with the current information system:

- Missing data analysis:
    - Percentage of intake records with missing values for each item
    - Percentage of other records with missing values for each item
- Number who complete the program, for all participants, by weight class at enrollment, and by blood pressure category at enrollment (see Table 11.1):
    - Within 4 months
    - Within 6 months
    - After 6 months
- Number who have been enrolled more than 6 months and not completed
- Average change in weight for completers categorized by initial weight class
- Distribution of weight loss – number and percentage with:
    - Weight loss greater than 10 lbs
    - Weight loss between 5 and 10 lbs
    - Weight loss between 0 and 5 lbs
    - Weight gain
- Number of enrollees with blood pressure by category
- Reduction in blood pressure risk categories by initial category – number and percentage of participants who:
    - Drop one category
    - Drop two categories
    - Drop three categories

Table 11.1 American Heart Association recommended blood pressure levels

Blood Pressure Category	Systolic Pressure (mm Hg)		Diastolic Pressure (mm HG)
Normal	Less than 120	and	Less than 80
Prehypertension	120-139	or	80-89
High:			
Stage 1	140-159	or	90-99
Stage 2	160 or higher	or	100 or higher

These additional summary statistics will allow program administrators and the AMHC to understand which enrollees are most likely to complete the program and which are most likely to benefit. We also suggest that weight loss be analyzed for people who attend a significant number of sessions but do not complete the program. Such an analysis would make it possible to determine whether following up on late-term drop-outs is necessary.

The MHI is currently negotiating a new Memorandum of Agreement with the program administrators in each county. As a part of this new arrangement, the AMHC expects the programs to be required to undertake additional record keeping materials. Standardized call logs will be implemented for recording calls to participants who missed classes, standardized attendance books and lesson plans with record books. Although none of these materials in themselves provide electronic records of participation, the expectation is that they will provide an oversight mechanism to encourage better attendance and better record keeping. If so, the existing spreadsheet information should improve in quality.

As a further step, the AMHC reports that a cost estimate is being obtained to create a web-based centralized information system for the program. This would be similar to the system currently being implemented for the hypertension program, as discussed below. Such a system, if designed and used properly, could expedite both record keeping and outcome evaluation.

Hypertension and Stroke Prevention and Education

The hypertension program operates through Community Health Centers (CHC) in Lee, Chicot and Crittenden Counties. The program provides screening for hypertension and enrolls hypertensive individuals who do not have other resources for appropriate health care. It provides case management and medication for enrollees.

Currently, we have very little information regarding the characteristics or behavior of program participants. We receive information on the number of individuals screened and the number enrolled at each CHC, but information on compliance or changes in health status has not yet been reported to us.

The MHI is in the final stages of testing a new data system for the hypertension program. The data system is being developed by the UAMS information technology department and is currently being tested by the CHC program coordinators. It is web-based, with all data being stored centrally on a UAMS server. The data will be entered through structured templates by program staff after each encounter and will contain subject demographics, personal history,

family history, risk factors as well as tracking visits, medications, and test results for participants. The system is expected to be fully implemented during the summer of 2005.

Provided the system is properly designed and implemented, it should provide an opportunity perform analyses similar to those we recommended above for the Eating and Moving program. Ideally, already existing data in the current system should be imported into the new one, so that full histories are available for all participants since the beginning of the program.

The data we have described in this section on *Participant Data Collection and Analysis* is useful to track the outcomes of participants. Program administrators can use such information to determine what parts of the initiative are working as planned and what parts require additional adjustments. The analyses provide an important method for communicating the successes of programming efforts back to funders and those charged with oversight. These data also provide valuable information with which to start the additional task of looking for changes in outcomes in the target population. As we discuss in the next section, we are likely to be most successful in detecting changes in health status and health related behaviors if we can determine which demographic subgroups are most likely to be participating in program activities. Without primary data collection and reporting by the programs on the characteristics of participants, population analysis might miss important positive contributions of funded programs.

Administrative and Survey Data About the Target Populations

To complement the evaluation efforts using participant-based data described above, we plan to track trends in hospitalization rates for hypertension, congestive heart failure (CHF), and diabetes as well as for stroke and acute myocardial infarction (AMI). The first three diagnoses are chronic conditions for which appropriate primary care can reduce hospitalizations (see the discussion below in the AAI section on avoidable hospitalizations). The latter two diagnoses are acute conditions that should be reduced in prevalence by the MHI interventions. We expect hospitalization rates for hypertension and stroke to decline in the counties served by the hypertension program and the other three conditions to decline in the counties served by the Eating and Moving program.

To perform this outcomes analysis, we will use population data from the hospital discharge data. These data provide information about inpatient stays in all Arkansas hospitals. The records contain information on the patient's demographic characteristics (age, race, sex), residential location (county, ZIP Code), and diagnoses. Using these records, we can track the percent of the target population who are hospitalized for selected diagnoses. Therefore, we need to identify conditions and their associated diagnoses that are likely to be improved by participation in EMFL and HPSE.

The hospital discharge data have the advantage that they track all hospitalizations, so there is no sampling error. Because of their comprehensive coverage of the population, we can not only look at trends in county hospitalization rates but we can further subdivide the population into demographic groups that have the highest participation rates in the MHI interventions.

The hospital discharge data do have two main disadvantages. First, they only provide information about inpatient episodes; they do not track changes in health status or behavior that do not rise to the severity of an inpatient stay. Their other disadvantage is that they cover only

Arkansas hospitals. We will not have information on participants in Crittenden County who use hospitals in Memphis, for example, or in Sevier County who use hospitals in Texarkana, Texas.

Although we would like to use survey data such the Behavioral Risk Factor Surveillance System to complement the hospital discharge data analysis, it has much too small a sample to be useful for detecting the effect of programs implemented at the county level.

OUTCOMES FOR THE ARKANSAS AGING INITIATIVE

As described in Chapter 6, the AAI is charged with offering educational programs to health care professionals and to providing elderly with healthcare, education and support. Their primary mission is education and support of elders in their regional centers. These centers enable the existence of senior health care clinics, so they are also responsible for increasing access to health care. The outcome measures for the AAI are selected to assess its effects on these missions.

Update on Outcomes for Avoidable Hospitalizations

In the 2004 report, we used data on inpatient stays to estimate baseline trends for avoidable hospitalization rates among elders for the counties containing the satellite COAs. In its seminal study on access to health care in America, the Institute of Medicine (1993) argued that timely and appropriate outpatient care would reduce the likelihood of hospitalizations for ambulatory care sensitive conditions, which are listed in Table 11.2. Since that study, measures of the rates of avoidable hospitalizations have been used in many analyses to demonstrate the effect of changing the availability and quality of primary care on subsequent health outcomes.[15]

Table 11.2 Avoidable Hospitalization Conditions

Chronic Conditions:	Acute Conditions:
Asthma/COPD	Cellulitis
Seizure Disorder	Dehydration
CHF	Gastric or Duodenal Ulcer
Diabetes	Urinary Tract Infection
Hypertension	Bacterial Pneumonia
Preventive Conditions:	Severe ENT Infection
Malnutrition	Hypoglycemia
Influenza	Hypokalemia

We performed our baseline analysis of avoidable hospitalization rates in anticipation that these trends will be altered in future years by education activities and increased access to care quality primary care brought about by AAI programming. In our benchmark analysis, we found that even prior to the opening of the COAs, the counties in which these facilities were located had lower rates of avoidable hospitalizations for acute and preventative conditions than the remainder of the state, but that rates were increasing everywhere.

[15] Bindman AB, Grumbach K, Osmond D, Komaromy M, Vranizan K, Lurie N, Billings J, Stewart A: Preventable hospitalizations and access to care. JAMA274 : 305-311,1995. Booth, GL and Hux JE: Relationship between avoidable hospitalizations for Diabetes Mellitus and Income Level. Arch Intern Med 163: 101- 107, 2003.

We will continue to monitor these rates in future years when sufficient time has passed that we can reasonably expect to find an impact. In addition, we will calculate and track these rates for specific elderly subpopulations that the COA's proposed database show to have the highest participation in AAI programming. We expect the trend in the rates for COA counties in general, as wellas for the targeted subpopulations, to turn down in response to the AAI's education of elders and providers and the improved access to health care.

Plans for Evaluating New Aging Initiative Outcomes

The AAI is taking great strides in collecting and analyzing participant data and is designing additional studies with collaborators. First we review a study completed by the AAI and then we describe some studies that are in various stages of planning and execution. We offer some suggestions that we think would further strengthen the already sound evaluation.

Completed data collection and analysis:

The AAI has collected and analyzed one round of satisfaction data on participants in the Senior Health Centers. These data were collected using a survey that was well designed for the task. It is similar to surveys such as the Consumer Assessment of Health Plans Study (CAHPS), the Patient Satisfaction Questionnaire (PSQIII), and other standard satisfaction scales. The survey covers the issues that patients cite in focus groups as key to a positive health care experience (e.g. time with provider, communication, listening, shared-decision making). It covers topics that the Institutes of Medicine (IOM), National Committee for Quality Assurance (NCQA), Centers for Medicare and Medicaid Services (CMS), and others identify as contributing to quality care.

Two waves of data were collected at the Senior Health Clinics that are affiliated with the first two satellite senior centers, Schmieding in Northwest Arkansas and El Dorado in South Arkansas. In the first wave, incoming patients were asked questions about their previous health care providers. The second wave was administered to patients who had been attending the Senior Healthcare Clinics for one year. These patients were asked about their current experience at the Senior Healthcare Clinics. Comparison of these two waves indicate that elders at both senior health clinics are more satisfied with their current care than with care received from their previous provider. There was a 51 percent improvement at the South Arkansas COA and a 22 percent increase at Schmieding, both of which were statistically significant at the 0.0001 level.

There may be a bias toward a positive outcome in these results for two reasons. First, people are more likely to be complimentary toward their current provider with which they have an ongoing relationship than toward a former provider. Second, people who changed from another provider to the Senior Health Centers are likely to be more dissatisfied with their previous provider than those who did not change providers. However, with those caveats in mind, the satisfaction surveys provide useful evidence that the senior centers have improved care for some people.

Studies in progress:

Through its health education initiatives, the AAI conducts classes for both community members (primarily elders and their families) and health care providers (professionals, paraprofessionals and students). Analyzing the impact of these efforts on the health status of elderly Arkansans involves many challenges. According to the AAI Director of Education, gathering information from class participants through a questionnaire that tests their acquired

knowledge is not feasible in either case. In the case of community members, significant numbers are functionally illiterate, which makes it impossible to collect information through written surveys. In the case of providers, many are unwilling to take the time to complete surveys after the class is completed.

In an attempt to gather information from the providers, the AAI central office recently mailed 3,700 questionnaires to education program attendees. Based on similar work in the past, approximately 15 percent of the questionnaires are expected to be completed and returned.

Based on this information and a copy of the survey provided to us, we offer the following suggestions to help strengthen the AAI evaluation activities in future:

- Identical surveys were mailed to the program participants regardless of the content of their particular session. This makes it impossible to ask questions that are sufficiently specific so that it can be determined whether particular points of knowledge were adequately communicated to the participants. We suggest a core set of questions for all programs plus others for each program that are specific to it. The core questions allow comparisons across programs and the additional questions allow program-specific analyses of behavioral change.
- The low response rate makes it likely that the responding sample is a biased subset of the surveyed population. More reliable information could be obtained at a similar cost by choosing a smaller random sample and then following up to achieve a higher response rate among this subsample.
- In light of the previous two comments, it might be most cost effective to randomly choose a few of the courses and survey all the participants in those courses with a survey tailored to the content of the course.
- If any of the courses require in-class evaluation of the participants by the instructor using a standardized instrument, it would be useful to obtain summary information from the instructors and compare the scores with benchmarks for similar classes taught elsewhere. For example, it is our understanding that the Continuing Medical Education courses provided by AAI include student evaluations to assess comprehension of the material. Results of these evaluations would be a useful measure for AAI to report.

Another effort that is underway to streamline the evaluation of the AAI's education programs is the Rural Center on Aging (COA) database project. This project will allow the COA staff from each of the Centers to record information for each educational event in a standardized format. The database will be designed to store information for mailing lists, educational events and clinic visits, thereby saving time and improving accuracy over the current idiosyncratic systems of each Center. The information about education events will include topic, date, intended audience, number of attendees, and hours.

We think this is an excellent step. Although we have not seen detailed specifications for the common database, we think that having electronic information on every participant in all centers in a common format will make future evaluation efforts much more efficient. Our understanding is that this database will store primarily contact, demographic and enrollment information, rather than information about knowledge acquisition or other outcomes. Even so, information about the demographics, residential location and health conditions of participants can be very useful in conjunction with the population outcomes analyses described below. Such

information can improve the focus of studies based on population survey and administrative data, enabling the evaluator to direct attention to the portion of the population with the highest participation rates and therefore who is most likely to show program effects.

Studies in planning stage:

The AAI has developed plans for pursuing further evaluation of their healthcare and education initiatives. These plans were combined with a proposed study of the financial viability of the Centers and submitted for funding to the ABI. Although the combined proposal was not funded, we have reviewed it and think that it provides a good foundation. We recommend that the AAI revise this proposal and continue to seek funding for implementing the planned evaluation.

These two outcomes projects will be useful contributions to the analysis of participant data to determine the effect of AAI programming on outcomes. The healthcare project includes both a study of change in physical and cognitive function of elders using two of the CoAs and an extension of the satisfaction study described above to four additional Centers. The education outcomes project will use a two-phase Delphi process to develop and reach consensus on indicators for measuring behavioral change that results from educational programming.

OUTCOMES FOR THE MEDICAID PROGRAM EXPANSIONS

Because the Medicaid expansions provide additional Medicaid benefits to eligible beneficiaries across the state, our outcome analysis examines potential program effects at the statewide level. In the 2004 evaluation report, we reported results for effects of each of the three operational expansion programs – benefits for pregnant women, hospital benefits, and AR-Seniors. In this section, we update our findings on outcomes for these three program expansions. No additional outcomes measures are planned for the Medicaid expansion program

Update on Outcomes for Expanded Benefits for Pregnant Women

Key Findings: We continue to find that the expansion of benefits for pregnant women has led to increased prenatal care. We find NO evidence that the expansion has reduced smoking among pregnant women or increased birth weights of their babies.

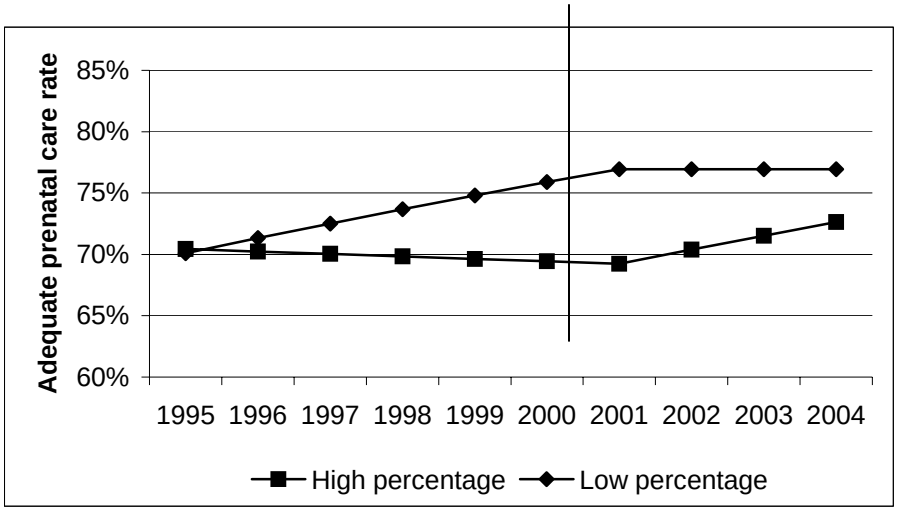
One component of the Medicaid expansion provides benefits to pregnant women whose income is between 133 percent and 200 percent of the federal poverty limit. We examine the extent to which this benefit led to better prenatal care for pregnant women in Arkansas. This supplements the spending analysis for the Medicaid expansion presented in Chapter 9. The spending analysis demonstrates the extent to which the new benefit was used by pregnant women. The analysis presented here examines whether the benefit led to additional care rather than to a shift to Medicaid from other payment sources.

For information on prenatal visit utilization, we use the number of prenatal visits reported on birth certificates. Adequate prenatal care was defined as having at least 10 prenatal care visits during the pregnancy.

The birth certificate data do not contain information on Medicaid status, so we used county-level data on poverty status as a proxy for concentrations of Medicaid recipients. (There also was not county-level data on the percentage of the population receiving the expanded Medicaid for pregnant women.) The Census Bureau provides estimates of the percentage of

each county's population that is in each of several categories defined by the ratio of income to the poverty level. Using the categories that are most closely aligned with the benefit change, we calculated the percentage of the population in each county with income between 125 percent and 200 percent of the federal poverty limit. We then examined whether there were increases in the percentage of women who had adequate prenatal care, and whether any increases were positively related to the percentage of the county population in this poverty category.

The analysis used data for all pregnant women in all counties in the state, and trends for the baseline and program periods were estimated. Then trends were projected for representative counties at the 10th and 90th percentiles of poverty levels for the county distribution, which are shown in Figure 11.2. The 10th percentile represents a county with 13.9 percent of people in the poverty range targeted by the Medicaid expansion, and the 90th percentile represents a county with 20.7 percent of people in that range.



Source: RAND analysis of Birth Certificate data and Census Bureau data

Figure 11.2 Use of Adequate Prenatal Care Visits, for Counties with High and Low Percentages of People Eligible for Expanded Medicaid Benefits, Age, Sex and Race Adjusted, 1995 through 2003.

In a similar finding to what we presented in 2004, we found that after the Medicaid expansion was introduced, rates of women receiving adequate prenatal care increased in counties with higher percentages of people in the defined poverty category. During the baseline period (2001 and earlier, represented by the vertical line in the figure), the percentages of pregnant women receiving adequate prenatal care decreased over time in counties with higher percentages of people in the defined poverty range. At the same time, the percentages receiving adequate prenatal care increased over time in counties with lower percentages of people in the poverty range. When the Tobacco Settlement programs started, the trends reversed, and since 2001, prenatal care has increased in counties with more women in the targeted poverty range. The most recent data from 2004 show that this trend is continuing and this finding remains statistically significant.

We used a similar method to determine whether pregnant women's smoking rates or newborn birth weights improved in counties with more pregnant women eligible for the expanded Medicaid benefit. We found no evidence of either effect, suggesting that additional steps should be taken to strengthen the impact of prenatal care on pregnant women's behavior and birth outcomes.

Update on Outcomes for Expanded Hospital Benefit and AR-Seniors

In the 2004 report, we used data on inpatient stays from Arkansas hospital discharge database to analyze the effect of expanded Medicaid hospital benefits on amount of hospital use by Medicaid recipients and the effect of the AR-Seniors program on hospital stays for conditions that should improved by better primary care. Due to the earlier delivery date of this year's evaluation report, we were unable to obtain an additional year of data from the hospital discharge database in time for the report. We will update these analyses in future reports. In the case of AR-Seniors, our 2004 analysis was intended to establish a baseline. We expect it to be several years until a measurable effect on hospitalizations will be detected.

APPROACH FOR ASSESSING OUTCOME FOR ACADEMIC PROGRAMS

Two of the programs supported by the Arkansas Tobacco Settlement funds – the College of Public Health (COPH) and the Arkansas Biosciences Institute (ABI) – are academic programs that are helping to build the health infrastructure in the state. Although these programs are expected to have large effects on the health of Arkansans, the effects are expected to be very long-term ones, requiring many years before the programs' research, service and training activities have measurable effects on the health status. Therefore, our outcome evaluation will focus on tracking the quality of their research, as measured by its impacts on the relevant scientific fields, and assessing how well the programs disseminate knowledge to the scientific community and targeted populations around the state.

High quality research is likely to eventually produce a positive impact on the health of Arkansans because it is likely to produce new scientific discoveries, new clinical techniques and new methods for translating these discoveries into quality healthcare than lower quality research efforts. Furthermore, high quality research will bring attention to the state that can be used to bring in additional research funds from national sources as well as commercial activities that can lead to more jobs, better opportunities and higher incomes.

The measures that we have proposed for the two academic programs address two target populations that are most important for the broad dissemination of new knowledge from research.

- The educational mission of academic programs requires that they transfer knowledge widely to the various communities within Arkansas. Their activities are most likely to translate into improved health across the state if the programs recruit students from all demographic and geographic segments of the population and place graduates into health related jobs throughout the state.
- A crucial step in leveraging quality research is to publish findings in recognized scientific journals that are judged by scientific peers to be an indicator of quality research, which is worthy of building on and funding.

We base our evaluation on a framework developed by our RAND colleagues for the evaluation of likely pay-off from research investments.[16] The returns from research fall into the following categories:

1. Knowledge production
2. Research targeting and capacity building
3. Informing policy and product development
4. Health and health sector benefits
5. Wider economic benefits

We propose to measure (1) "knowledge production" by using Journal Impact Factors to provide an approximate measure of the likely impact of research publications on furthering their specific areas of knowledge. We measure (2) "targeting and capacity building" by verifying that areas of research are consistent with intent of the Act and by recording the communities from which students come and where they go. We measure the last three types of benefits by undertaking a qualitative review of selected projects to provide independent verification that they are likely to lead to payoffs of these types.

Measuring the knowledge production of funded research requires making predictions about the extent to which a current research project will become the building block for future clinical and policy changes that will improve the health of Arkansans. Using Journal Impact Factors (JIFs) allows us to leverage the scientific reviews made by scholarly journals. JIFs measure the rate at which scholars have cited a journal's recent articles. A high citation rate indicates that scholars have judged the journal's articles to be of high scientific quality and therefore worth referencing in their own work. The JIF for a journal tends to be relatively stable over time because high quality journals receive more submissions from which the editors and peer-reviewers can select the best scientific work. If a ABI or COPH study is accepted in a high JIF journal, that indicates that it has been judged to be of high scientific quality and likely to have an impact on the field. Therefore, we summarize the JIFs for journals in which ABI and COPH studies are published to track the likely impact of the research. Although, as described in Appendix D, the JIF is not a perfect measure of scientific quality, it has many advantages including providing timely information and being low cost.

The Institute for Scientific Information, the producers of JIFs, assigns every journal that they rate to one or more subject categories. Our quality measures are based on the ranking of journals within their subject categories. The citation rates measured by the JIFs differ dramatically among subjects because different styles of scholarly writing differ among subjects. However, JIFs provide a useful ranking of journals within subject, so we can base our measures on whether funded research leads to publications in the top 5 or top 10 journals in its subject. We also propose to report the average JIF for all publication from all ABI and COPH projects in each subject. Tracking this average from year to year will measure changes in research quality in each subject over time.

It should be noted that not all publications are in journals that are included in the ISI's citation index. Journals and other publication venues that do not receive JIF ratings tend to be non-peer reviewed, of minimal circulation or rarely cited by other scientific journals. While

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[16] *The Returns from Arthritis Research,* http://www.rand.org/publications/MG/MG251/

publications in non-JIF rated venues can make contributions to the research process, research published in ranked journals is likely to have a greater eventual effect on the wellbeing of Arkansans. Therefore, we define four quality levels of publications:

1. publications in journals ranked in the top five by subject
2. publications in journals ranked between top five and top ten by subject
3. publications in journals ranked below top ten by subject
4. publications in journals or other venues not ranked by ISI

As the quality of research produced by the funded programs increases over time, we expect the cumulative percentages to increase for publications in top five and top ten journals.

We have consulted with the ABI and with COPH about these proposed measures. In the sections below, we describe preliminary analyses based on samples of their publications. The ABI acknowledges that these are useful measures that can capture their progress toward their mission of improving the health of Arkansans through research initiatives. The applicability of these measures to the research efforts of the COPH is not a straightforward. Much of the COPH research is community-based participatory research, which has publication venues whose influence might not be accurately measured by JIFs. As described below, we will be continuing our discussions with the COPH to refine these measures to so that we may effectively measure the quality of COPH research.

To complement the quantitative analysis of publications, we will undertake a review of two projects identified by the COPH and two by the ABI as outstanding examples of their contribution to improving the health of Arkansans, either now or in the future. We include this component in the outcomes evaluation in recognition that quantitative measures often miss some of the truly important aspects of an organization's work. Furthermore, the greatest impact of any institution is better represented by the "home-runs that are hit" by the stars of the organization than by the average performance that is usually the subject of quantitative analysis.

The following two sections provide more details on the application of this approach to each of the funded academic programs.

OUTCOMES FOR COLLEGE OF PUBLIC HEALTH

The COPH is a new unit within the University of Arkansas for Medical Sciences, created with Tobacco Settlement funds, and like most academic units has the triple mission of providing education, research and service. Its leadership and faculty take pride in the community-oriented way in which they work toward all three components of the COPH mission. By engaging in community-based participatory research, they are using a research method that is recognized to create academic-community partnerships thereby improving outcomes and reducing disparities in the process of creating knowledge.[17]

The diverse activities and communities with which the COPH faculty and students work makes it difficult to define specific measures of the effect of their work on the health of the population. Therefore, we rely on indirect measures of the impact of their work. We

[17] *Community-based Participatory Research: Assessing the Evidence* http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=hstat1a.chapter.44133

examine the quality of their research as measured by peer evaluation and we examine the extent to which their teaching efforts are placing graduates throughout the state. We also will undertake a qualitative analysis of two exemplary projects.

Journal Impact Factors

As discussed above, Journal Impact Factors (JIF) are useful and convenient measures of the potential value that research publications will create. However, COPH has expressed concerns about whether the community based participatory research in which they concentrate will be adequately evaluated by the JIF measures that we propose. We will continue to examine the proposed JIF ratings and field rankings that create a variety of quality measures, and we will consult with COPH to refine these measures so that they make a positive contribution to the evaluation effort.

We have performed a preliminary analysis of the research publications by the COPH faculty. We randomly sampled 29 published articles from the 2004 list of publications by COPH faculty and looked up their JIFs on the ISI Web of Knowledge website.[18] This exercise was not intended to provide definitive measures COPH publication quality but only to provide evidence that the JIF will be an informative source for measuring progress by the COPH if followed from year to year.

We found that COPH publications in the sample were fairly evenly spread over the four quality levels that we defined. This suggests that a complete evaluation of COPH publications from the past two years will provide a good baseline measure of research quality and that the number and percent of future publications at each level can be used as a measure of improvement.

We also examined the distribution of the sample COPH publications among the subject areas assigned to journals by ISI. As expected, we found high representation is subjects that match the mission of the program such as *Public, Environmental and Occupational Health* and *Health Care Sciences and Services* although the 29 publications that we reviewed were from journals that had a total eleven subjects assigned to them. We found that in most cases, the COPH average JIF was below the average JIF of the top ten journals in the subject, suggesting that improvements in quality in each field could be measured by tracking the ratio of the COPH subject average to the top ten subject average. We will continue to work with COPH to refine these measures to capture quality in community based participatory research.

Characteristics of Extramural Funding

Another measure of the quality of the research being undertaken by the COPH faculty is the nature of the extramural funding that is being brought in to fund their research. Research funding can come to the College from many sources in many ways. Some research is funded by state and local governmental agencies, some by Federal agencies, some by local foundations and some by national foundations. Some is awarded based on scientific merit and some is awarded

[18] The ISI Web of Knowledge is a subscription website. For this preliminary analysis, we used our affiliation with the University of Pittsburgh Medical Center to obtain access. The UAMS is a subscriber to the website and further analysis of these measures will be conducted through their account.

based on other considerations. Some is awarded solely to College faculty while other grants are made to collaborative activities of faculty working with other academics or community partners.

We will monitor the following three characteristics of extramural funding that indicate success by the College in important dimensions of their mission:

- The total amount of funding from sources that use a rigorous process such as peer reviewing to determine the scientific merit of the research. Examples of such sources are the National Institutes of Health and the Robert Wood Johnson Foundation.
- The amount of external funding that the College receives for projects that are collaborative with community partners. Increasing success in this area will indicate that the College is successfully building relationships in the community and is likely to be assisting their community partners in developing internal capacity as is consistent with a Community Based Participatory Research strategy.
- The amount of funding that comes from sources outside of the state such as national governmental agencies or foundations and corporations in other states. It is reasonable to assume that these funds represent a net gain for Arkansas rather than a reallocation of resources that would have been used for other purposes within the state.

For all of these categories, we will track the amounts of funding over time and as a percent of total extramural funding. It is important to note that a balanced portfolio of funding is necessary – the goal is not to have 100 percent peer reviewed or collaborative projects, but to maintain a balance of projects. In addition, for funds brought in from outside the state, we will use standard economic multipliers to estimate the total economic impact including both expected employment and income growth.

Geographic Distribution of Graduates

Our process evaluation includes information about the home origins of the students at the COPH. Our outcome evaluation will track where these students go after graduating. We will work with information provided the College's alumni office to monitor trends in the number and percentages of graduates pursuing employment in each of the states AHEC regions.

Qualitative Analysis of Exemplary Projects

Finally, we will undertake a review of two projects identified by the COPH as outstanding examples of the College's contribution to improving the health of Arkansans, either now or in the future. We include this component in the outcomes evaluation in recognition that quantitative measures often miss some of the truly important aspects of an organization's work. Furthermore, the greatest impact of any institution is not represented by the average performance that is usually the subject of quantitative analysis, but is the result of the "home-runs that are hit" by the stars of the organization.

In its annual report and other internally produced material, the College currently highlights a few of its outstanding research, teaching and service efforts. We will work with the College to identify two projects that merit further analysis. We will perform an objective and independent inquiry into the nature of the projects and ascertain the likely benefits to the health of Arkansans. In doing so, we will provide a verification of claims made by the College and perhaps contribute insights to how addition benefits can be realize from these projects. Our analysis will focus on

the potential of each project for payback of the types listed in the introduction to this section, specifically numbers (3) Informing policy and product development, (4) health and health sector benefits, and (5) Wider economic benefits.

We propose the following process and timetable for these qualitative reviews:

1. September 1: RAND provides COPH with detailed evaluation criteria.
2. October 1: COPH nominates four studies for further analysis, providing RAND with brief descriptions and publication list for each study.
3. October 15: RAND chooses two from the four nominated.
4. November 15: COPH, if it chooses, provides RAND with additional material on two chosen studies. Additional material could include:
   a. Works in progress;
   b. Additional detail on expected benefits from research;
   c. Suggested external reviewers.
5. February 15: RAND provides COPH with draft reviews. The reviews will include an external review for each project from a researcher familiar with the subject as well as RAND's internal review.

OUTCOMES FOR THE ARKANSAS BIOSCIENCES INSTITUTE

The primary purpose of the ABI is to "encourage and foster the conduct of research" in accordance with a set of purposes outlined in Chapter 8 that relate to health and tobacco use. As a part of a diversified portfolio of Tobacco Settlement activities, this program will take the longest time to realize its full benefits. However, the benefits could be quite large. Successful research activities can change the possibilities for health care and can create new economic activities that will raise the standard of living for many Arkansans. Therefore, we rely on indirect measures of the impact of their work. We examine the quality of their research as measured by Journal Impact Factors and we examine the extent to which their teaching efforts are building capacity within the state. We also will undertake a qualitative analysis of two exemplary projects.

Journal Impact Factors

As discussed above, Journal Impact Factors (JIF) are useful and convenient measures of the potential value that research publications will create. We will use the JIF ratings and field rankings to create a variety of quality measures for ABI research publications that we will track from year to year.

We have performed a preliminary analysis of the research publications by the ABI faculty. We randomly sampled 31 published articles from the 2003-2004 list of publications by ABI researchers and looked up their JIFs on the ISI Web of Knowledge website.[19] This exercise was not intended to provide definitive measures ABI publication quality but only to provide evidence

[19] The ISI Web of Knowledge is a subscription website. For this preliminary analysis, we used our affiliation with the University of Pittsburgh Medical Center to obtain access. The UAMS is a subscriber to the website and further analysis of these measures will be conducted through their account.

that the JIF will be an informative source for measuring progress by the COPH if followed from year to year.

We found that ABI publications in the sample were fairly evenly spread over the four quality levels that we defined. This suggests that a complete evaluation of ABI publications from the past two years will provide a good baseline measure of research quality and that the number and percent of future publications at each level can be used as a measure of improvement.

We also examined the distribution of the sample ABI publications among the subject areas assigned to journals by ISI. As expected, we found high representation is subjects that match the mission of the program such as *Pharmacology* and *General Medicine* and *Oncology* although the 31 publications that we reviewed were from journals that had a total 26 subjects assigned to them. We found that in most cases, the ABI average JIF was below the average JIF of the top ten journals in the subject, suggesting that improvements in quality in each field could be measured by tracking the ratio of the ABI subject average to the top ten subject average.

Characteristics of Extramural Funding

Another measure of the quality of the research being undertaken by the ABI faculty is the nature of the extramural funding that is being brought in to fund their research. Research funding can come to the Institute from many sources in many ways. Some research is funded by state and local governmental agencies, some by Federal agencies, some by local foundations and some by national foundations. Some is awarded based on scientific merit and some is awarded based on other considerations.

We will monitor two characteristics of extramural funding that indicate success by the ABI in important dimensions of their mission:

- The total amount of funding from sources that use a rigorous process such as peer reviewing to determine the scientific merit of the research. Examples of such sources are the National Institutes of Health and the Robert Wood Johnson Foundation.
- The amount of funding that comes from sources outside of the state such as national governmental agencies or foundations and corporations in other states. It is reasonable to assume that these funds represent a net gain for Arkansas rather than a reallocation of resources that would have been used for other purposes within the state.

For both of these categories, we will track the amounts of funding over time and as a percent of total extramural funding. In addition, for funds brought in from outside the state, we will use standard economic multipliers to estimate the total economic impact including both expected employment and income growth.

Geographic Distribution of Graduates

To measure the extent to which ABI research is building capacity for Arkansas in the form of trained scientists, we will examine the geographic distribution of where students come from and where they go after working on ABI research projects.

Undergraduate students often only work a brief time on ABI projects, but such an experience can have a lasting effect on their interest in science. Unfortunately, it is nearly impossible to track where students settle after graduation since the ABI researchers often lose

touch with former undergraduate assistants. Therefore, we would like to track the community of origin for these students. We have proposed that ABI ask funded researchers to report the location of origin (county within Arkansas, other state within US, or other country) for all undergraduate students working on ABI projects. If this data can be collected, we will report the geographic distribution of the place of origin for undergraduate assistants.

Graduate students working on ABI projects often have stronger associations with the ABI researchers than do the undergraduates. In many cases the ABI research is a central part of their training and often plays a part in their career path. We have proposed that ABI track not only the location of origin for current graduate assistants, but also the location after leaving graduate school and the type of job (academic, government, not-for-profit, business). If this data an be collected, we will report on the origins current graduate assistants and the destinations of recently departed graduate assistants.

Patents

Another intermediate measure of research productivity is the creation of intellectual property that is protected through the patent process. Although it can be many years, if ever, before the ideas embodied in patents make useful contributions to the health and economic wellbeing, they are a tangible marker of the creative process. We will track the number of patents issued to ABI researchers each year. An increasing trend will indicate greater knowledge production, capacity building and the potential for wider economic and health benefits.

Qualitative Analysis of Exemplary Projects

Finally, we will undertake a review of two projects identified by the ABI as outstanding examples of the Institute's contribution to improving the health of Arkansans, either now or in the future. We include this component in the outcomes evaluation in recognition that quantitative measures often miss some of the truly important aspects of an organization's work. Furthermore, the greatest impact of any institution is not represented by the average performance that is usually the subject of quantitative analysis, but is the result of the "home-runs that are hit" by the stars of the organization.

In its annual report and other internally produced material, the Institute currently highlights a few of its outstanding research efforts. We will work with the ABI leadership to identify two projects that merit further analysis. We will perform an objective and independent inquiry into the nature of the projects and ascertain the likely benefits to the health of Arkansans. In doing so, we will provide a verification of claims made by the Institute and researchers. Our analysis will focus on the potential of each project for payback of the types listed in the introduction to this section, specifically numbers (3) informing policy and product development, (4) health and health sector benefits and (5) wider economic benefits. The reviews will verify scientific merit of the research but will concentrate on the potential of the research to achieve its mission of expanding of improving the health of Arkansans through new and expanded agricultural and medical research initiatives. The process and schedule for these reviews is outlined above in our introduction to the evaluation of academic programs.

We propose the following process and timetable for these qualitative reviews:

1. September 1: RAND provides ABI with detailed evaluation criteria.

2. October 1: ABI nominates four studies for further analysis, providing RAND with brief descriptions and publication list for each study.
3. October 15: RAND chooses two from the four nominated.
4. November 15: ABI, if it chooses, provides RAND with additional material on two chosen studies. Additional material could include:

a. Works in progress;
b. Additional detail on expected benefits from research;
c. Suggested external reviewers.

5. February 15: RAND provides ABI with draft reviews. The reviews will include an external review for each project from a researcher familiar with the subject as well as RAND's internal review.

SUMMARY

Through the development work this year, the outcome evaluation is increasingly focusing on program-specific outcomes. Some of these measures already have been developed and we are tracking data for them to assess trends in program effects. For other measures, the measures themselves and their data sources are still under development, and we plan to move forward with use of these measures as soon as it is feasible to do so. Throughout this process, we continue to consult with the programs to ensure that the outcomes we are assessing are useful not only for the State policymakers but also for the programs themselves.

Chapter 12
Synthesis and Recommendations

The Initiated Act defined an extensive scope for the Arkansas Tobacco Settlement Program. Its components include management of several trust funds, support for the seven individually funded programs, funding of construction loan debt service for three new buildings, and funding for the Tobacco Settlement Commission to provide oversight and monitoring of the program. We began this evaluation report by describing the policy context within which the priorities, goals, and funding allocations for the funded programs were established and currently operate. This context includes the functions of the Tobacco Settlement Commission, including its oversight of the funded programs and its funding of additional community grants with available funds generated by interest earned by the Tobacco Settlement trust fund. Then we examined the progress of each of the seven programs in fulfilling its mandates, as it developed and expanded its programming. Finally, we presented updated results from our outcome evaluation regarding program effects on trends in tobacco use and other outcomes, and we presented plans for future evaluation of additional non-smoking program outcomes.

In this chapter, we bring together all of these individual evaluation results in a synthesis of the performance of the Tobacco Settlement Program and its funded programs. We also offer some recommendations for consideration by the Commission and the General Assembly regarding issues identified in the evaluation.

SUMMARY OF PERFORMANCE THROUGH FISCAL YEAR 2004

The Initiated Act stated basic goals to be achieved by the funded programs through the use of the Tobacco Settlement funds, and it also defined indicators of performance for each of the funding programs—for program initiation, short-term actions, and long-term actions. The basic goals are listed in Chapter 2. During FY2005, the RAND team worked with each of the funded programs to establish long-range goals that define targets for future program activity. We also worked with each program to establish outcome measures that will enable us to assess the effects of the program on outcomes relevant to it. Both the long-range goals and outcome measures are intended to move each program toward the long-term actions defined for it in the Initiated Act.

Progress of the Programs on Short-Term Goals

In the 2004 evaluation report, we reported our assessment of the status of the programs on the program initiation goals and short-term actions defined for them in the Initiated Act. At that time, all the programs except the Medicaid expansion program had achieved their initiation goals. With this report, the Medicaid program still has not achieved its initiation goal because the CMS continues to refuse approval of the AR-Adults program (see Chapter 9 for details).

We summarize in Table 12.1 updated findings regarding performance of the seven programs on their short-term goals, as defined in the Initiated Act. Last year, we reported that all except two of the programs had achieved their short-term goals. The two exceptions were the Minority Health Initiative and the Medicaid program.

Table 12.1 Program Status on the Short-Term Performance Indicators Listed in the Initiated Act

Indicator	Text of Indicator in the Initiated Act	Status
Tobacco Prevention and Cessation		
Short-Term	Communities shall establish local Tobacco Prevention Initiatives.	Goal met
College of Public Health		
Short-Term	Obtain federal and philanthropic grant funding.	Goal met
Delta Area Health Education Center		
Short-Term	Increase the number of communities and clients served through the expanded AHEC/DHEC offices.	Goal met
Arkansas Aging Initiative		
Short-Term	Prioritize the list of health problems and planned intervention for elderly Arkansans and increase the number of Arkansans participating in health improvement programs.	Goal met
Minority Health Initiative		
Short-Term	Prioritize the list of health problems and planned intervention for minority populations.	Goal met for African American population
Short-Term	Increase the number of Arkansans screened and treated for tobacco-related illnesses.	Goal met; slow enrollment
Arkansas Biosciences Institute		
Short-Term	Arkansas Biosciences Institute shall initiate new research programs for the purpose of conducting, as specified in Section 15: agricultural research with medical implications; bioengineering research; tobacco-related research; nutritional research focusing on cancer prevention or treatment; and other research approved by the Institute Board.	Goal met
Medicaid Expansion		
Short-Term	The Arkansas Department of Human Services demonstrates an increase in the number of new Medicaid-eligible persons participating in the expanded programs.	Goal partly met; slow enrollments

At the time of the 2004 evaluation report, the Minority Health Initiative had not yet established a prioritized list of the health problems and planned interventions for minority populations. Soon after completion of our report, the MHI released a list of priority health problems for African Americans; however, similar priorities for other minority populations in the state are not yet addressed explicitly in the list. We conclude now that the MHI has met this short-term goal by establishing its initial priority list, although we encourage it to update its list to encompass issues for other minority populations. We also note that growth in enrollments in MHI programs has been slow (and recent enrollment in the Hypertension program has declined).

We reported in the 2004 evaluation report that the Medicaid program had spent only a small fraction of its Tobacco Settlement appropriations because of its inability to implement one of its four Medicaid benefit expansions as well as under-spending by the other three expansion programs. This situation continues a year later, although the enrollments and spending on enrollee's health care services in the three operational programs have grown since FY2004. Therefore, we again conclude that the Medicaid program has not yet met its short-term goal of increasing participation in the expanded programs. Our finding this year is based solely on the continued low activity levels in the three operational programs, because we recognize that the AR-Adults program is not likely to obtain CMS approval. The Medicaid funds are to be used to

support expanded health insurance coverage for low-income individuals who do not have access to private health insurance and do not otherwise qualify for Medicaid. Instead, the unspent funds have been placed in the Tobacco Settlement Program Fund.

The remaining programs continue to be very effective in implementing the activities mandated by the Act. For each program, we have identified issues that should be addressed and areas for needed improvement, but none of these issues is so large as to call into question the overall effectiveness of a program's operation.

Assessing Program Progress on Long-Term Goals

The Initiated Act specifies the following long-term goals for the programs supported by the Tobacco Settlement funds:

Tobacco prevention and cessation – Surveys demonstrate a reduction in numbers of Arkansans who smoke and/or use tobacco.

College of Public Health – Elevate the overall ranking of the health status of Arkansas

Delta Area Health Education Center – Increase the access to a primary care provider in underserved communities.

Arkansas Aging Initiative – Improve health status and decrease death rates of elderly Arkansans, as well as obtaining federal and philanthropic grant funding.

Minority Health Initiative – Reduce death/disability due to tobacco-related illnesses of Arkansans

Arkansas Biosciences Institute – Research results should translate into commercial, alternate technological, and other applications wherever appropriate in order that the research results may be applied to the planning, implementation and evaluation of any health related programs in the state. The institute is also to obtain federal and philanthropic grant funding

Medicaid Expansion – Demonstrate improved health and reduced long-term health costs of Medicaid eligible persons participating in the expanded programs.

A review of these goals highlights that they are targeting "ultimate" outcomes for the improvement of the health and well-being of Arkansans, which are expected to take years to be accomplished. In addition, none of the goals has measurable endpoints that can be used to determine the extent to which programs have achieved them.

In this year's evaluation work, RAND has focused its development efforts on working with the programs to establish measures that can be used to assess progress toward these goals. Two sets of measures have been developed: long-term programmatic goals that define the programs' vision for their future scope of activities, and outcome measures that can be used to assess the effects of the programs on the most salient outcomes for each program. Using these measures, the evaluation will be able to track progress of the programs with respect to both operational goals and effects on program-specific outcomes.

The program goals for each program are presented in Chapters 3 through 9, and the outcome measures are presented in Chapters 10 and 11. These measures for each program are brought together for ease of reference in Appendix E. We encourage the ATSC to formally

approve the program long-term goals, and to monitor the programs' progress toward those goals in their regular reports to the ATSC. The monitoring should be a two-step process, starting with tracking how well programs are moving toward their operational goals, and then assessing how much effect this progress is having on their outcome measures. If those levels of operation are not affecting outcomes, then the long-term goals may have to be revised to target stronger interventions to ultimately affect outcomes.

PROGRAM RESPONSES TO COMMON THEMES AND ISSUES

Some common themes and issues emerged from the first evaluation cycle that apply across the programs. For those issues, we offered recommendations in the 2004 evaluation report for actions to strengthen the programs in the future. We are monitoring the progress of the programs in carrying out these recommendations as part of our quarterly telephone updates with each program. We summarize these recommendations here, and we highlight activities undertaken by the programs for each recommendation. Relevant issues that merit consideration by the ATSC are identified.

Collaboration and Coordination Across Programs

Collaborative activities among the programs would strengthen their ability to serve the goals of the Act, to use the Tobacco Settlement funds efficiently, and to enhance needed health services for Arkansans. Some programs had been working together early in the program, and other opportunities were identified for additional collaborative programming.

Recommendation. We encourage the programs to pursue opportunities for collaboration as their work continues.

Responses: The amount of cross-program collaboration has been growing during the past year. The programs most actively engaged in collaboration thus far have been the ADH, COPH, Delta AHEC, MHI, and AAI, all of which are working with one or more of the other programs. We present here some key examples of collaborative efforts, which we believe can serve as building blocks for further expansion of these activities:

- The ADH is working with the Delta AHEC and MHI to coordinate and reinforce their respective tobacco cessation services. It also recently awarded the COPH the new contract to run the statewide smoking cessation network.
- For the ADH tobacco prevention and cessation program, the Delta AHEC sits on three Hometown Health committees in Phillips, Lee, and Monroe counties in the Delta, and the Delta AHEC staff helps these committees with their initiatives.
- The AAI is planning a collaboration with the COPH on the evaluation of parts of the program.
- COPH students are participating in AAI activities that have led to publications.
- The Delta AHEC and the AAI have shared activities through some shared staffing in the AHEC and COA in Monroe County.
- The Delta AHEC is providing some technical support to the MHI Hypertension initiative in Lee County.

- A Commissioner on the AMHC is also on Delta AHEC advisory board, to better link activities between two programs.
- The COPH is doing cultural diversity training in the Delta , and Delta AHEC staff are attending these training sessions.

The ABI and the Medicaid expansion programs are not engaged in joint activities with other programs. Both programs differ substantially from the other ones, which are more oriented to public health and community education programs.

Governance Leadership and Strategic Direction

The diversity of the programs is reflected in the wide variety of governing bodies they have. Now that the startup period is over, the governing bodies should play active roles in guiding the future strategic direction for the programs. They also provide an important vehicle for linking a program to its environment so the program hears the views of its stakeholders and has access to vital resources it needs. Regardless of their structures, all the funded programs are accountable to the public, and it is appropriate for records of governance decisions and actions to be made publicly available to document their policy oversight of the programs.

Recommendation. The governing boards or advisory boards of the funded programs should work with program management in defining a clear direction for the program, and should perform a constructive oversight function to ensure the program is accountable for quality performance.

Recommendation. Individuals who can provide expertise on the goals defined for the program by the initiated Act should be included in the membership of the program governing boards or advisory boards.

Responses: These recommendations are most relevant for the ADH, Delta AHEC, AAI, MHI, and ABI, all of which have some form of board, commission, or advisory groups. The COPH and Medicaid expansion programs do not have designated boards or advisory groups, although they might want to consider forming advisory groups as vehicles for eliciting community input, developing strategy on pertinent issues, and identifying potential funding opportunities. In this discussion, we focus on the five programs that currently have boards or advisory groups to document their status and any actions they have taken this year to strengthen the roles of these bodies.

- ADH – The Tobacco Cessation Advisory Board was created as mandated in the Initiated Act to provide oversight for the tobacco prevention and cessation program. This board, which meets quarterly, is reported to be providing strong policy guidance to the program (e.g., its emphasis on second-hand smoke).
- ABI - The ABI board meets regularly and is reported to be closely informed on the ABI activities. The Board and staff also work to ensure they are updating and listening to the ABI advisory boards. The ABI board is specified in the Initiated Act so its membership is fixed. The advisory committee members bring a breadth of expertise to the program.
- AAI – The advisory boards of the regional Centers on Aging do not provide program oversight, but they are providing the COAs with community input and access to funding opportunities. Strengthening the roles of these boards has not been a priority item for

attention this year. The COAs are mixed in how they use and work with their advisory boards, and the boards are not advanced enough to participate in the business aspects of the initiative.

- Delta AHEC – Much of the business direction of the Delta AHEC derives from the UAMS AHEC system. The Delta AHEC has formed advisory boards at each of its three sites. The Helena board has been less active than the others, although the board has been actively involved in the planning for the new AHEC building.
- MHI – A number of physicians currently serve as Commissioners for the AMHC, bringing clinical expertise to the program. It is not clear whether the Commission has members with public health expertise. Two Commission seats are open, which have remained unfilled since the current executive director was hired (these are government appointments). These open seats offer an opportunity to add other relevant expertise not currently represented on the Commission.

Monitoring and Quality Improvement

As of the end of FY2004, few of the programs had internal accountability mechanisms for regular monitoring and providing feedback on the program's progress, or where mechanisms were in place, they relied on local program staff who often do not have sufficient training or resources to fully comply. Such a monitoring process, when well implemented, enables programs to perform regular quality improvement and assess how well each program component is meeting its goals. This capability also can help the programs fulfill their external accountability for performance to legislators and other state policy makers.

Recommendation. To monitor and improve quality and to assess program effects on health outcomes, the funded programs should have in place an ongoing quality monitoring process that has valid measures of performance, regular data collection on the measures, corrective actions to address problems, and regular reporting of data to management. The internal performance indicators and corrective actions should change over time to bring about ongoing, incremental improvements in the program operation.

Responses: The information provided by the programs on their quality improvement activities reflects the early status of some of their quality efforts. This is not unexpected, given the relative newness of the programs. The first task is to get the programs operational and achieve smooth programming. The next tasks are to identify the program area priorities for quality monitoring and develop measures and data collection capability to address these priorities. Three of the programs – the Delta AHEC, AAI, and MHI – currently are in these stages as they are establishing data systems and defining standards for performance. All of them are working through the expected challenges of data availability, collection, and validity.

The ADH has a program-wide evaluation mechanism in place that has been providing it with information for quality monitoring in the TPEP program. However, evaluation strategies and data collection have varied across its program components. The ADH emphasis during this past year has been to standardize the performance and monitoring requirements for all the organizations with which it is contracting. All evaluation information collected is reported regularly to the Tobacco Cessation Advisory Board.

The COPH and ABI report that they have well-established quality management systems. The COPH has a quality improvement process because it is required for accreditation. The ABI research has been built upon already existing research programs within the participating institutions. Each of the participating universities is monitoring its research activities, with reports submitted to the ABI central office.

The Medicaid expansion program does not have an active quality improvement process at this time. Such a process could be useful for ensuring the quality of the enrollment process, which could yield increased enrollments and recipients who are more informed about the programs and they benefits available to them.

Financial Management

In the 2004 evaluation report, our analysis of the spending of the Tobacco Settlement funds identified issues in two areas: budgeting for the appropriation process and the program financial management and accounting systems and capabilities.

The appropriation process and fund allocations. During the initial budgeting and appropriations process, several programs had appropriation allocations across expense classifications that did not fully match their operational needs. The program leaders were reluctant to make substantial changes to the fund allocations in the second biennial appropriations because it brought the risk of opening up the entire package to funding changes or reductions. Thus, the spending constraints experienced by the programs in the first two fiscal years were perpetuated in the FY 2004-05 biennial appropriations, which hindered several programs from using their funding effectively.

Recommendation. For the upcoming appropriations process, the state should provide the programs with clear definitions of the appropriation line items as well as guidance for the budgeting process, so that programs understand clearly how they can use funds in each line item to support their activities. In addition, the programs should restructure the budgets they submit to the state for the next appropriations process so that allocations of spending across line items reflects actual program needs and are consistent with the appropriations definitions.

Responses: The programs that were having the greatest problem with poorly allocated appropriations were the four programs that are part of the UAMS system: the AAI, COPH, Delta AHEC, and the UAMS portion of the ABI. A proposal for reallocation of the FY2005 budgeted line items for these programs was submitted by UAMS to the Peer Review Committee of the General Assembly, which approved the reallocation. The approved reallocations are shown in Table 12.2. The patterns of reallocations differed for the programs, but a common element was expansion of the operating expense line items, accompanied by reductions in other line items.

For the FY2006-07 biennial appropriations, which was completed in April 2005, the programs modified their line item allocations as needed. This step should help ensure that future program appropriations do not place artificial constraints on the programs' ability to spend according to operational needs.

Financial management and accounting. Several of the programs are lacking in some aspect of the accounting and bookkeeping skills needed for effective financial management. Additional training and support should be provided to the programs, as needed, to strengthen

their ability to document their spending accurately and to use this information to guide program management.

Recommendation. Every program should have in place a *local* automated accounting system that it uses to record expenditures as they occur and to report spending to its governance and management on a monthly basis. This system would provide the detailed financial information needed for program management that is not provided by the larger systems within which many of the programs operate (e.g. the state or UAMS financial systems). Within this system, the programs should ensure they have:

- Personnel with the relevant qualifications to perform accounting or bookkeeping functions, who also are trained in use of the external accounting systems to which their programs report expenditures;
- Separate accounts for each key program component so that the program can budget for and monitor spending by component.
- Monthly monitoring of program spending along with reporting of financial statements and explanations of variations from budget to the program governing body at every meeting.

Responses: From a strictly structural perspective, all of the programs are supported by well established financial systems, although multiple systems are involved, as shown here:

ABI	Each of the member universities has its own financial system
COPH	The UAMS financial system.
AAI	The UAMS AHEC financial system
Delta AHEC	The UAMS AHEC financial system.
ADH	The State financial management system
MHI	The State financial management system
Medicaid	The State financial management system.

From an operational perspective, few of the programs are using these accounting resources for proactive monitoring and reporting of financial data by program management and governance. In RAND's most recent analysis of program spending, we were able to obtain the needed data from the programs much more easily than we could last year. However, for the programs with multiple components (ABI and the AAI), we still had to go to the individual components for their financial data, rather than being able to obtain it from the leadership of the overall program. We would be able to get the needed information from the program leads if the individual components were submitting regular financial statements to them.

Other programs with multiple program components (e.g., Delta AHEC, MHI, and possibly COPH) do not yet appear to be establishing separate accounts for individual components. Having this capability not only can provide more useful data for program planning, but also strengthens the program accountability in reporting to stakeholders and external funders. It is not clear whether the financial systems being used might hamper the programs' ability to establish accounts by program components, or whether there may be other barriers.

The last step in the financial accountability process is the regular reporting of financial statements to the programs' governing bodies (if relevant) and to the ATSC. As discussed in

Chapter 2, the ATSC has not yet asked the programs for financial reports because it is still developing a process and tools to make this process as useful and efficient as possible.

Table 12.2 Reallocation of Program Line-Item Budgets in the FY2005 Appropriations

	Authorized Appropriation	Reallocated Appropriation
Arkansas Aging Initiative		
Salaries	$ 1,278,527	$ 1,175,000
Personal Services Match	232,733	300,000
Operating Expenses	198,515	604,475
Travel \ Conferences	56,500	20,000
Professional Fees & Services	0	150,000
Capital Outlay	558,200	75,000
Total	$ 2,324,475	$ 2,324,475
College of Public Health		
Salaries	$ 2,500,613	$ 2,350,000
Personal Services Match	484,316	525,000
Operating Expenses	196,784	376,713
Travel \ Conferences	40,000	60,000
Professional Fees & Services	100,000	100,000
Capital Outlay	165,000	75,000
Total	$ 3,486,713	$ 3,486,713
Delta AHEC		
Salaries	$ 1,347,405	$ 1,195,000
Personal Services Match	245,270	280,000
Operating Expenses	340,800	539,475
Travel \ Conferences	41,000	25,000
Professional Fees & Services	0	85,000
Capital Outlay	350,000	200,000
Total	$ 2,324,475	$ 2,324,475
Arkansas Biosciences Institute (UAMS)		
Salaries	$ 1,926,987	$ 785,000
Personal Services Match	350,773	185,000
Operating Expenses	524,144	1,556,904
Travel \ Conferences	60,000	35,000
Professional Fees & Services	300,000	100,000
Capital Outlay	1,000,000	1,500,000
Arkansas Children's Hospital	1,994,772	1,994,772
Total	$ 6,156,676	$ 6,156,676

POLICY ISSUES AND RECOMMENDATIONS

As stated in the 2004 evaluation report, we reiterate here that we believe the programs supported by the Tobacco Settlement funds provide an effective mix of services and other resources that respond directly to many of Arkansas' priority health issues. In addition, the College of Public Health and the Arkansas Biosciences Institute are building educational and research infrastructure that can be expected to make long-term contributions to the state's health

needs. With another year of operation, the programs have achieved their initiation and short-term goals defined in the Initiated Act, with but one exception. The programs' impacts on health needs also can be expected to grow as they continue to evolve and increasingly leverage the Tobacco Settlement funds to attract other resources.

Overall Recommendation Regarding Continued Program Funding. We again recommend this year that Tobacco Settlement funding continue to be provided to the seven funded programs. At the same time, performance expectations for the programs should be maintained actively through regular monitoring of trends in their process indicators, progress toward the newly establish long-term goals, and trends in impacts on relevant outcomes.

In addition to this overall recommendation, we offer the following suggestions regarding issues identified for some of the programs, for consideration by the Commission, the Governor, and the General Assembly in their policy deliberations.

Tobacco Prevention and Cessation Program

As we discussed in the 2004 evaluation report, both inadequate tobacco control policy by the State and erosion of financial resources for the ADH tobacco prevention and cessation program are weakening its ability of this otherwise well-designed and managed program to affect smoking behaviors by Arkansans. As discussed in Chapter 10, our outcome evaluation is starting to detect reductions in smoking rates among some population groups, but these gains may not be sustained in future years if support for this programming continues to erode.

As of the end of FY2004, the ADH program continued to be funded at levels below the CDC recommendations for tobacco prevention and cessation programs. With the new appropriations adopted for FY2006-07, its authorized funding will decline both in absolute terms and relative to the other programs receiving Tobacco Settlement funds. Thus, its share of the total Tobacco Settlement dollars, which already was below what the Initiated Act had designated for tobacco prevention and cessation activities, will be yet smaller in the second biennium.

Other key components of a comprehensive tobacco-control program are legislation that bans smoking in public areas and increases taxes on tobacco products. Arkansas has increased tobacco taxes but has not been able to enact significant statewide bans on smoking in public places. As discussed in Chapter 2, five bills proposing smoke-free environment laws were filed in the 85th session of the General Assembly, of which only one was enacted (prohibiting tobacco use on hospital properties).

Recommendation: The funding share for the ADH Tobacco Prevention and Cessation Program should be increased to return its funding for tobacco prevention and cessation activities to a level that complies with the percentage share stated in the Initiated Act.

Recommendation: The General Assembly and State administration are encouraged to increase other financial resources for tobacco control programming, which should be designed to complement the ADH programming so that existing shortfalls in CDC-recommended levels of funding for individual program components can be alleviated.

Recommendation: The State should enact additional legislation that bans smoking in public places, which would reinforce the actions already being taken by the ADH and other organizations to achieve and maintain behavior changes for Arkansans and to reduce smoking rates.

Minority Health Initiative

The MHI is uniquely positioned to address directly the health needs and priorities of the minority populations in the state. It has made some real progress in programming growth and financial reporting during FY2005, and it is spending more of its available funds than it had in the previous biennium. However, as discussed in Chapter 7, issues of declining enrollments, quality problems, and extremely high unit costs have been identified for the MHI Hypertension initiative. The cost issues surfaced for the first time this year when RAND evaluation team was finally able to obtain spending data for each of the contracts executed by the AMHC with outside entities. These issues appear to be directly related to how the contract with the Community Health Centers of Arkansas currently is structured, with little accountability or financial consequences for low enrollments or inadequate clinical performance. We did not identify such issues for its other contracts, and in particular, the Eating and Moving for Life program is operating at reasonable levels of costs per enrollee.

Recommendations: We offer three inter-related recommendations for the MHI:

- The ATSC should work with the AMHC to help strengthen the MHI programming so that its funding resources are used for cost effective programming for the health needs of minority populations.
- As stated last year, if the MHC continues to under-spend its Tobacco Settlement funding through FY 2005, then its funding share should be reduced to the level it is spending and the unused resources should be applied to other programming that addresses the health needs of minorities.
- Similarly, if the MHI Hypertension initiative cannot achieve appropriate service volumes, quality and costs, then alternative service delivery organizations and contracting mechanisms should be considered to replace its current contract with the community health centers.

Medicaid Expansion

The intent of the Initiated Act was to use the funds to provide insurance coverage for individuals not otherwise eligible for Medicaid. The under-spending of the Tobacco Settlement funds for this program has two consequences for the state. The first is the absence of insurance coverage for people in poverty who were intended to be reached by these expanded benefits, with related effects on health status and outcomes. The second is loss of federal funds that the State obtains through the matching of three dollars of federal Medicaid funding for every State dollar spent on health care services.

As we reported in our previous report, to reinforce the growth of enrollments and service delivery in the expansion programs, an investment of some of the unspent Medicaid Expansion Program funding should be to made toward enrollment outreach and other activities to expand enrollments in the three existing expansion programs. Although these administrative costs do not get the full 3:1 match in Federal funds, they are matched in a 1:1 ratio, and the resulting enrollments will lead to medical care expenditures that do receive the full Federal match.

Recommendation: A portion of the appropriation for the Medicaid Expansion Program should be budgeted and used to support community outreach on the expanded benefits and education of enrollees on the health care benefits available to them.

Recommendation: The unspent Medicaid expansion funds should be put to work within the Medicaid program to cover health care services for people in need who do not meet the standard Medicaid financial requirements, to ensure that Arkansans are obtaining needed care and that the state retains the large leveraging of funds available through Federal Medicaid matches. This could be through emphasis on growth of the existing expansions or adding other Medicaid expansion options.

The unspent Medicaid Expansion funding is an available resource that also could be used to expand services for health behaviors that are preventable factors for the health priorities of heart disease and cancer. Although we believe that the first goal should be to increase enrollments in the existing Medicaid Expansion Programs, any remaining funds could be put to good use by expanding Medicaid eligibility for coverage of other needed services.

ATSC Management of Program Progress

During the first years of the Tobacco Settlement program, the RAND evaluation served to assess the progress of the funded programs in the startup and early operation of their program activities, as well as to work with the programs to establish goals and measures for use in monitoring their continued operation and growth. In the 2004 evaluation report, we presented a recommendation to the ATSC for actions it can take to reinforce reporting for accountability by the programs. In Chapter 2 of this report, we summarize what actions the ATSC has implemented thus far and its plans for continued development of monitoring and technical support for the programs.

The RAND evaluation team believes that at this time in the Tobacco Settlement program, it is appropriate to begin to shift the role of monitoring the performance of the programs' activities away from the external evaluator into the hands of the ATSC. One of RAND's responsibilities as evaluator is to support the sponsoring organization (the ATSC) in making this evaluation function an integral part of its ongoing operation by the end of FY2006. RAND will continue to serve as an objective observer, reviewing performance reports the programs submit to the ATSC and assessing data on the programs' process indicators. However, the emphasis of the RAND evaluation should increasingly focus on analysis of program effects on outcomes, a function that requires the modeling and statistical expertise that we can best provide.

Recommendation. The ATSC should continue to work toward establishing a complete reporting package through which the funded programs provide it with performance information on both their program activities and spending, which it should use for monitoring program performance on a regular basis. This package should include quarterly reports that contain the items specified in our 2004 evaluation report, as well as quarterly financial statements, quarterly data that extend trends in the process indicators of service activity, and annual reports on progress toward long-term goals.

CONTINUED EVALUATION ACTIVITIES

As the Tobacco Settlement programs move forward in the services and activities being funded, they will continue to grow to the extent that they are able to leverage this funding to attract additional support from other sources. The growth and maturity of the programs should lead to increased effects on relevant outcomes, and the programs increasingly should be held accountable for these outcomes over time.

In the upcoming period through December 2006, RAND plans to shift its evaluation of the Tobacco Settlement programs toward a focus on program outcomes while supporting the ATSC in building its regular performance monitoring process. In particular, the evaluation will track progress of the programs in addressing the issues and recommendations presented in our evaluation reports as well as progress being made toward accomplishing the newly defined long-term program goals.

The outcome evaluation will continue to assess trends in program effects on outcomes, as detailed in Chapters 10 and 11 of this report. Similarly, we will continue to work with individual programs to refine and apply the program-specific outcome measures that have been identified this year. Through this process, the programs are developing improved data collection methods and increasing measurement and analysis capabilities, which will help them manage their programs and quality improvement processes and also will ensure that decisionmakers can assess performance in achieving program goals.

DISCUSSION

The Arkansas General Assembly and Tobacco Settlement Commission have much to be proud of in the investment made in the seven programs supported by the Tobacco Settlement funds. These programs continue to make substantial progress in expanding and strengthening the infrastructure to support the health status and health care needs of Arkansas residents. We have begun to observe effects on smoking outcomes, and with time, we believe the prospects are good for the programs to achieve observable impacts on other health-related outcomes over the next few years as the funded programs continue to learn and adjust to achieve full program effectiveness.

Arkansas has been unique among the states in being responsive to the basic intent of the Master Tobacco Settlement by investing its funds in health-related programs with a focus on reducing smoking rates. We encourage the State policymakers to reaffirm this original commitment in the Initiated Act to dedicate the Tobacco Settlement funds to support health-related programming. To do justice to the health-related services, education, and research these programs are now delivering, they must be given the continued support and time they need to fulfill their mission of helping Arkansas to significantly improve the health of its residents. In addition, they must take the actions needed to ensure that issues identified in this evaluation are addressed to reinforce the effectiveness of Arkansas' investment in the health of its residents.

Appendix A
RAND Evaluation of the Arkansas Tobacco Settlement Program
Evaluation Methods

The evaluation approach we have designed responds to the intent of the Tobacco Settlement Commission to perform a longitudinal evaluation of the development and ongoing operation of its funding program. We employ an iterative evaluation process through which information is tracked on both the program implementation processes and effects on identified outcomes. This information can be used to inform both future funding decisions by the Commission and decisions by the funded programs on their goals and operations. Presented below is a description of each of the three major evaluation components: policy analysis, process evaluation, and outcome evaluation.

POLICY EVALUATION

The policy evaluation was performed to achieve two purposes. First, we documented the policy issues confronting the State of Arkansas, which was the context within which the Coalition for Healthy Arkansas Today (CHART) process and the Initiated Act were developed, and we identified the priorities and rationale for the funding decisions implemented in the Initiated Act. Second, the results of the program evaluation were synthesized and interpreted in the context of the State's policy issues to provide the Commission and other policymakers with additional information to assist future decisions on Tobacco Settlement policy and funding priorities.

Sources of information for the policy evaluation included existing documents produced by various State agencies, federal agencies, or relevant policy research organizations, as well as interviews with stakeholders involved in or affected by the use of the Tobacco Settlement funds or relevant programs. We conducted individual and group interviews with key stakeholders, through which we learned and documented their perspectives regarding priorities and activities being undertaken by the Tobacco Settlement programs.

PROCESS EVALUATION

Process evaluation refers to a set of evaluation activities that document the development, implementation, and ongoing activities of a program (Devine, 1999) and their level of quality. We performed a process evaluation for each of the programs funded by the Tobacco Settlement Commission.

Process evaluations provide a rich context in which to interpret outcome results – a context that ties these results to the levers that produce them. Without a process evaluation, outcome evaluators may find themselves trying to explain outcomes as a function of services that may not have been delivered or that are different from what the program intended to deliver (Scheirer, 1994). Process evaluation also has a formative function (i.e., providing insights and understandings that can be continuously fed back to those involved in setting up the delivery of services) (Browne and Wildavsky, 1987). When performed as a continuous, collaborative, and iterative activity, an activity that draws upon multiple sources of data on an ongoing basis over the lifetime of the study, a process evaluation can grow and change as a program matures (Dehar, Casswell, and Duignan, 1993; Shadish et al., 1991). Finally, a well-designed process evaluation

can provide critical findings on facilitators and barriers to program implementation—findings that will be invaluable for future replication of an innovative program model.

The framework used to perform the process evaluation for each of the funded programs was the FORmative Evaluation, Consultation, and Systems Technique (FORECAST) model. In this process evaluation system, program staff and evaluators collaboratively decide what needs to be monitored and how (Goodman and Wandersman, 1994). It is especially well suited for this evaluation because the funded programs are pursuing very distinct program activities and interventions.

As the first step in the FORECAST process, we worked with the programs to develop logic models depicting what the program has identified as the underlying issues and how it will operate to successfully address those issues. In this case, the definition of issues was guided by the performance mandate that the Initiated Act defined for each program. The Action Plans built upon work already begun by the programs, as well as the priorities defined for each program in the initiation, short-term, and long-term performance indicators defined in the Initiated Act.

Documenting Program Development and Progress

To monitor the development and progress of the funded programs on a regular basis, we are using a combination of annual site visits and quarterly conference calls. At the site visits, we are able to observe the programs in operation at their facilities, engage in dialogue with program leaders and participants, and conduct interviews with other stakeholders outside of the program management. The site-visit information represented annual "data points" in a longitudinal collection of data on a program's status over time. Through the quarterly conference calls, we collect data for intervening points in time between the site visits, through which we document trends in program development, along with changes in the issues the programs face over time and how the programs manage those issues.

Annual Site Visits. The first annual site visits were conducted in March and April 2003, and the second site visits were in April 2004, and the third visits were in February and March 2005. In the first two years, the site visit for each program consisted of two parts—meetings with the program management and staff to gather information on the program scope and operation, and interviews with other stakeholders who are users of the program or community leaders, to learn their perspectives on the program. In the third year, the site visits were limited to meetings with program management and staff, to gather information on program progress and issues encountered, and to work with them in developing long-term goals for each program.

Each site visit was planned in advance in consultation with the program lead. After each site visit, the RAND site-visit team prepared a report summarizing what we learned from the discussions, interviews, and associated documents.

Quarterly Conference Calls. Regular contact with the programs between site visits is maintained through quarterly telephone conferences. During these calls, the programs inform RAND staff of significant events that have taken place over the past three months, including significant achievements and successes that should be given special notice, as well as ongoing barriers and challenges they face. At the initial site visits, we identified sets of key issues for each program that we followed. At each quarterly call, we document the status of the program in managing these issues, and we identify other new issues that have emerged. Collectively, these reports yielded a description of the evolution of each program over time.

The quarterly conference calls are conducted with each program in July, October, and January of each evaluation cycle. The fourth contact in the cycle is the annual site visit in March or April of each year, at which the program's full year of activities are assessed.

Process Indicators

A set of process indicators was developed for each of the funded programs. The purpose of the indicators is to provide information for the General Assembly, Tobacco Settlement Commission, and the funded programs about the programs' progress in achieving the aims established in the Initiated Act. The process indicators consist of the following:

- *longitudinal measures* that can be evaluated on a periodic basis to track program trends over time (e.g., percentage of residents in a county who participated in an educational program)
- *single-event measures* that document the achievement of key program achievements (e.g., completing a needs assessment).

The process indicators were generated at the start of the evaluation through an interactive process with the funded programs. As RAND developed the indicators, we consulted with the program leads to ensure that the programs (1) were kept fully aware of the contents of the evaluation, (2) could assess the validity of the indicators from the program perspective, and (3) had an opportunity to identify key process measures they felt had been overlooked.

The indicators address policy-level aspects of the programs that relate directly to the program mandates specified in the Initiated Act. Differing numbers of indicators were developed for each program, depending on the complexity of the program and the level of detail the program preferred for tracking its progress. RAND selected the process indicators using the following criteria:

1. Closely related to the most important program outcomes
2. Early indicators of performance
3. Easy to measure
4. Creates incentives that are aligned with the goals of the program
5. Diverse in order to cover the range of markers
6. Either longitudinal to show change from year to year or a key program end point.

The programs' performance on the process indicators has been monitored on a semi-annual basis for the two six-month periods of January through June and July through December of each year. We gathered the data retrospectively for the time from initial program funding to the start of the evaluation, so that programming trends can be tracked from inception. The data collection has continued prospectively as part of the longitudinal evaluation. Trends in the indicators have been reported to the Tobacco Settlement Commission. This information is reported for each program as part of the process-evaluation results in Chapters 3 through 9.

Long-Range Goals

As described above, the RAND evaluation team worked with the funded programs in the FY2005 evaluation cycle to develop long-range goals that define the direction and level of activity that each program is planning to achieve. Many of these goals build upon the process

indicators established for the programs; others address other desired achievements. Whenever possible, the long-range goals are quantified to enable their achievement to be measurable. In some cases, however, the goals are stated in qualitative terms, usually reflecting uncertainty in the feasibility of achieving a goal or inadequate data to be able to measure it yet. The goals established for each program are stated in Chapters 3 through 9 and summarized in Chapter 12.

Analysis of Program Spending Trends

An important part of the process evaluation is documenting and assessing trends in the programs' spending of the Tobacco Settlement funds. The pace at which spending grew in the early months of the funding reflects the speed at which a program was able to initiate its new programming and bring it to full operational status. In addition, the extent to which the programs spent the available funds on the mandated services or other programming is a measure of their success in applying these valuable resources to addressing the health-related needs of Arkansans.

In early 2005, we requested monthly financial data from all the funded programs on their spending of the Tobacco Settlement funds they had received. Using the information provided, we prepared schedules of appropriations, funds received, and actual expenditures for each program. Monthly patterns of spending by line items were analyzed to identify any variances from trends, with particular attention to the line items with the largest expenditures. Wherever possible, we tracked spending by key program components so that trends could be followed for the mix of services provided by each program. The results of the spending analysis are reported in Chapters 3 through 9 as part of the process-evaluation results for each program.

OUTCOME EVALUATION

For an effective outcome evaluation, we examine program results relative to the over-arching goals to be achieved through application of the Tobacco Settlement money. For example, we examine whether the expenditures had a positive impact on the health of Arkansans. Such an analysis requires knowledge of counterfactuals: What would the health of Arkansans have been in the absence of the funded programs? What would the outcomes have been if the money had been spent on other programs instead?

The outcome evaluations presented in Chapters 10 and 11 use data from a variety of sources to measure the effect of the funded programs on the smoking-related outcomes and non-smoking outcomes of Arkansans. We describe here the data and methods used in the analyses, making references to particular sections of the chapters that provide examples of where these methods are used.

Measuring Outcomes

The scope of the outcome evaluation was defined by the outcome measures we selected for analysis. The first step in this process was to review the goals of the Tobacco Settlement expenditures. The measures selected had to be capable of providing information on how well the programs are meeting those goals. Then we worked with the program leads in identifying outcomes that would be expected to change as a result of the program interventions they were implementing. We used this information to define candidate measures, and we then assessed the availability of data needed to analyze each measure.

Two sets of outcome measures were defined for the evaluation: overall measures that addressed global outcomes for the state as a whole, and program-specific measures that addressed outcomes specific to the types of services provided by each program. All of the overall measures were measures of smoking behaviors and related health outcomes, which address one of the fundamental goals of the Initiated Act—reducing use of tobacco products across the state.

To accurately estimate program effects, two values of each outcome measure must be compared: the actual outcome that occurs in the presence of the program and a counterfactual value of the outcome that would have occurred if the program had not been implemented. Many outcome measures would change even without the program as a result of trends in demographics and economic conditions. Therefore, simple baseline outcome measures often do not provide adequate counterfactuals by which to measure program impact.

It is well documented that program changes require time to be translated into health outcomes for a given population. Furthermore, localized program activities will affect only the population exposed to the program. Some of the programs supported by the Tobacco Settlement funds are state-level programs. However, in many cases, the program interventions are not applied equally across the entire state but are focused on specific geographic areas or on a designated population subgroup. Therefore, state and national-level data from such instruments as the Behavioral Risk Factor Surveillance System (BRFSS) and Youth Risk Behavior Surveillance System (YRBSS) are not specific enough to detect and assess program effects for some of the funded programs. Other data sources had to be sought to address these outcomes.

Assessment of program impacts requires the ability to connect the effort undertaken by a program to the expected outcome in a way that takes into account other factors that influence the outcome. If this is not done, changes in an outcome could be attributed incorrectly to a program's interventions when in fact the changes were due to other factors. Examples of other factors include the following:

- Broader (nationwide or regional) trends that are independent of local program efforts
- Continuation of trends that pre-date the program and reflect effects of earlier actions or interventions
- Changes in the demographic composition of the population
- Efforts by other related programs

Assessment also requires that findings be presented with an indication of their statistical precision. Whenever survey data are collected and analyzed, it is important to report not only the size of the effect, but also the degree of certainty. The degree of certainty can be reported as a margin of error (+/- so many percent), as a confidence interval (the narrower the interval, the more precise the estimate), or as a significance level on a hypothesis test (whether or not the finding is reliable or could be expected by chance). Without this additional information, the reader does not know whether an apparent impact reflects changes in the underlying behavior or merely variability in the data or model.

The Use of Population Measures

In this appendix, we discuss the data and methods related to outcome measures for the entire target population rather than for program participants alone. For example, we measure changes in smoking rates for all adults in Arkansas rather than for a group who participated in a particular education or cessation program. In many cases the target population is restricted to a particular demographic group (e.g.,youth) or a specific geographic region (e.g., the Delta), but in all cases we measure outcomes for that entire target population, and not for a specific group of program participants.

There are several advantages of this approach. First, some program components, either alone or in combination with other program components that have similar goals, have sufficient size that an impact should be measurable at a population level. In such a case, it is important to demonstrate that the program affects a broad segment of the population. Second, some components, such as media campaigns and other educational outreach efforts do not have participants *per se,* but are targeted at everyone in a particular population. Third, many programs have an impact that extends beyond the immediate participants. For example, programs that attempt to change the behavior of program participants through education can affect the behavior and health outcomes of other people who are in contact with the immediate participants. Finally, and perhaps most importantly from an evaluation standpoint, it is very difficult to distinguish between pre-program tendencies and the impact of the program under study if only outcomes for program participants are considered. The people who participate in a specific program frequently are the most motivated individuals in the population, and many would improve their outcomes even without participating in the program.

Only through comparison to a control group or through careful statistical modeling is it possible to determine whether the outcomes for a group of program participants are due to the program or simply reflect a high level of motivation on the part of program enrollees. Creating a randomized control group is neither cost-effective nor politically feasible. Collecting voluminous background information on participants to use in statistical modeling is also expensive and intrusive. Therefore, we focus our outcomes evaluation on programs that we judge to be sufficiently large to have a measurable impact on an identifiable target population and for which we have population outcome measures.

Data Sources and Outcome Definitions

Smoking-related Outcomes

Table A.1 lists the main sources of data used for the analysis of outcomes in the target populations. The primary outcome of interest, smoking behavior, is measured by several of these data sources. The Behavioral Risk Factor Surveillance System is a survey that asks a random sample of each state's population a series of questions about behaviors related to health outcomes, including whether or not they smoke. The Youth Risk Factor Surveillance System records the answers to similar questions for a sample of youth. The Natality Data Public Use File records the answers to questions about smoking for all women who give birth.

The BRFSS is the primary source of information regarding smoking behavior for the adult population. The sample size of approximately 3000 Arkansans per year is adequate to obtain a fairly precise estimate of smoking prevalence among the adult population in the entire state, but

precision drops considerably when using these data for analysis of specific subpopulations within the state.

The YRBSS is of similar size so the same comments apply. An additional limitation of the YRBSS is that it is only collected every two years and in the most recent collection the response rate in Arkansas was sufficiently low that it did not meet the CDC requirements for valid data.

Table A.1 Data Sources and Outcome Measures

Outcome	Figure	Data
Tobacco Prevention and Cessation		
Adult smoking prevalence *	10.2, 10.3, 10.11	Behavioral Risk Factor Surveillance System
Cigarette Consumption	10.4, 10.5	Cigarette Excise Tax Revenue; Adult Tobacco Survey
Pregnant women smoking prevalence *	10.6, 10.7, 10.13	Natality Data Public Use File (Birth Certificates)
Pregnant teenager and young adult smoking prevalence	10.8, 10.9	Natality Data Public Use File (Birth Certificates); Behavioral Risk Factor Surveillance System
Sales to minors	10.10	Synar inspections
Delta AHEC		
Adult smoking prevalence	None	Behavioral Risk Factor Surveillance System
Pregnant women smoking prevalence	10.13	Natality Data Public Use File (Birth Certificates)
Teen Pregnancy	11.1	Natality Data Public Use File (Birth Certificates)
Medicaid Expansions		
Adequate prenatal care	11.2	Natality Data Public Use File (Birth Certificates)

* Also analyzed for association between county programming activity and smoking

The other source of smoking prevalence information has a different set of limitations. The information on the smoking behavior of pregnant women is collected for all women who give birth, which produces a sample of approximately 35,000 observations per year in Arkansas. This sample size is adequate for producing precise estimates of smoking prevalence of this population and many subpopulations defined by age, race and county of residence. However, the unique circumstances of this special population limit its usefulness as an indicator of changes in smoking behavior among the general population.

Two other direct data sources also provide information on smoking activity. Monthly revenue reports from the sales of cigarette tax stamps by the Arkansas Department of Finance to cigarette wholesalers allows for the calculation of the number of packs of cigarettes sold each month. Similar information is available annually for all other states. The Synar amendment requires random inspection of tobacco retailers to determine compliance with laws prohibiting sales to minors. Data from these inspections provide information regarding the success of a state in preventing such violations.

A final source of information regarding smoking behavior and attitudes toward smoking and smoking regulation is the Arkansas Adult Tobacco Survey. Conducted in 2002 and 2004, it asked a battery of questions of randomly selected adults. Unfortunately, comparisons with

BRFSS and cigarette excise tax collection data suggest that the AATS under-sampled smokers in 2004. Presumably, tobacco cessation and prevention programming had heightened awareness about smoking and more smokers than non-smokers declined to participate in the 2004 study. Other states have had similar difficulties. [20] Although we report some findings from the AATS, we think they should be interpreted cautiously.

Non-smoking Outcomes

We also use data sources that provide health status and health care utilization information in order to examine the effect of funded programs on these outcomes. The birth certificate data provide information on expectant mothers' use of prenatal care and on infant birth weight. As noted above, the birth certificate data also provide information on the age, race and residential location of the mother thereby allowing analysis of health and healthcare differences along these dimensions. When used in conjunction with population counts from the Census, the birth certificate information can provide estimates of teen pregnancy rates by residential location (i.e. counties or zip code within Arkansas or by state and metropolitan area for other states) and by demographic group.

The hospital discharge data provide information on the primary and secondary diagnosis as well as basic demographics, residential location, and type of payor for all hospital stays. These can be used to identify hospitalizations for smoking related illnesses such as asthma, strokes and acute myocardial infarctions as well as hospitalizations that are likely to be the result of inadequate primary care (McCall et al. (2001). Counts of these events are used in conjunction with Census data to estimate rates for subpopulations that are targeted by funded programs.

Program and Policy Information

As described below, these outcomes data are most useful when used with information that measures the program and policy efforts that have an impact on smoking and related health outcomes. We have assembled data on ATS funded program effort within state for the major community based programs (ADH, MHI, DHEC and AAI). For inter-state comparisons, we have annual spending on prevention and control activities by state for years 2000 through 2005. We also have data on cigarette taxes by state for 1970 through the 2003.

Analytic Framework

This section describes a common analytic framework that we apply to the evaluation to many of the smoking-related and non-smoking outcomes. For many of these outcomes, we analyze administrative or survey data that provide information on individuals in the populations targeted by the funding programs. Although the analyses for each of the programs have many idiosyncratic features, most share four basic steps. The first step is to calculate the prevalence of a behavior or a condition in each year for which data are available. The second step is to use multivariate analysis to adjust for changes in demographic composition in order to isolate changes in behavior or health status for people of similar characteristics. In the third step, we estimate the baseline trend in the outcome for the adjusted population and compare the observed outcomes following program implementation to what would be expected based on this trend.

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[20] Ramsey LT, Pelletier A, Knight S. Differences in smoking prevalence between the Adult Tobacco Survey and the Behavioral Risk Factor Surveillance System [letter to the editor]. Prev Chronic Dis [serial online] 2004 Oct [date cited]. Available from: URL:http://www.cdc.gov/pcd/issues/ 2004/oct/04_0056.htm.).

Finally, in some cases we are able to investigate whether deviations from this baseline trend differ from those observed in other states or in other portions of the state with less intense programming.

Prevalence

The analyses require a stable sample frame for a sequence of years. For example the BRFSS annually surveys a national random sample of all adults, age 18 and over. From this sample, a consistently measured outcome is obtained. For example, the BRFSS used the same question about smoking behavior starting in 1996. Using the sample weights, which adjust for variation in sampling rate by demographic category, the estimated prevalence in the population can be defined, along with a measure of precision that indicates how much variation in the estimate would be expected if the sampling process was repeated. This most simple of analyses is reported in Figure 10.2 for adult smoking prevalence in Arkansas.

A modification of this approach is used for the prevalence of smoking among pregnant women (Figure 10.6). In this case, the sample frame is all pregnant women, so no sampling weights are needed and sampling precision is not an issue.

Adjusting for demographic composition

Smoking prevalence, the proportion of a population who smoke, is not useful for measuring the effectiveness of anti-smoking programs when other factors are affecting this proportion. The first factor we address is the changing composition of the population. From year to year, the aging process as well as migration in and out of the sample frame changes the identity of the people in the sample frame. Since smoking rates differ among people of different ages, different racial and ethnic identities and between men and women, it is important to account for demographic changes that could influence smoking trends.

We do this by performing multivariate analysis of the outcome measures for individuals as a function of their demographic characteristics. We create measures of age, race, sex and pregnancy status and include these as explanatory variables in a regression. The regression also includes measures of time, which allow us to measure the change in the outcome after controlling for changes in population demographics.

This multivariate analysis takes into account the sampling design using STATA 8's commands for clustered sampling. We use appropriate functional forms, such as logit for binary outcomes (smoking versus not smoking) or least squares regression for continuous outcomes that have approximately normal distributions.

Table A.2 presents the odd ratios from the logit estimates that are used to adjust for demographic changes. The coefficients indicate that men smoke more than women, blacks smoke less than whites or than people from other racial/ethnic groups. The relationship between age and smoking is captured by the coefficients on age and age squared with prevalence reaching its maximum at age 34. Throughout the period of study, the average age of the population increasing is getting older and the percentage of the population from other racial/ethnic groups is increasing, both of which have effects on smoking prevalence. Performing multivariate analysis isolates the changes in smoking prevalence that are related to these demographic changes, allowing us to focus on changes in prevalence that are unrelated to demographic changes.

Table A.2 Logit estimates for Figure 10.3
Dependent variable: currently smoking = 1, 0 otherwise

	First Regression Model		Second Regression Model	
	Odds Ratio	Standard Error	Odds Ratio	Standard Error
Male	1.172**	0.040	1.172**	0.040
Pregnant	0.485**	0.110	0.483**	0.110
Black	0.714**	0.042	0.714**	0.042
Other Race	1.3**	0.121	1.309**	0.122
Age	1.071**	0.007	1.071**	0.007
Age squared	0.999**	0.000	0.999**	0.000
Year 1997	1.164	-0.106		
Year 1998	1.039	-0.085		
Year 1999	1.09	-0.088		
Year 2000	0.989	-0.081		
Year 2001	1.005	-0.082		
Year 2002	1.031	-0.082	1.027	-0.068
Year 2003	0.961	-0.075	0.97	-0.072
Year 2004	0.992	-0.079	1.013	-0.088
Year			0.988	-0.013
Observations	27555		27555	

Data source: Arkansas BRFSS, 1996-2004
* significant at 10 percent; ** significant at 5 percent; *** significant at 1 percent

The coefficients on the dummy variables for each year in the first column in Table A.2 provide an estimate of the difference between prevalence in that year and in the omitted year (1996) after adjusting for demographic changes. In this case, the prevalence in any year is not significantly different from the prevalence in 1996. The adjusted prevalence estimates that are graphed in Figure 10.3 (i.e. the points around the line) are based on this equation evaluated at the sample means of the demographic variables and the appropriate year dummy.

Baseline Trend Extrapolation

We also use multivariate analysis to estimate the baseline trend and to test whether the years following program initiation are significantly different from the baseline trend. The second column of Table A.2 contains logit estimates that are similar to those in the first column except the pre-program years are captured by the linear trend rather than yearly dummies. The coefficient on the trend is negative but not significant indicating that the decrease during the baseline period is negligible. Evaluating this equation at the sample means of the demographic variables creates the linear trend graphed in Figure 10.3.

The equation also includes dummy variables for each post-initiation year. The test statistics associated with these coefficients test the null hypothesis that the adjusted outcome is equal to the extrapolated baseline trend. This hypothesis is not rejected for any of the post initiation years in this example, which suggests that the program has not had an impact on smoking behavior for the general adult population.

It is also possible to estimate a new trend line for the post initiation years. We create a spline variable that takes on the value zero for all years up to program initiation and then counts the positive integers for each year following program initiation. The coefficient on this variable

indicates the change from the baseline trend in the years following initiation. This approach is used in Figure 11.1 to create lines that have a kink at program initiation.

Comparative Analysis

The above analyses are based on a pre/post design. Inference about the effect of a program is based on deviations from the pre-program trend, making a comparison only between the target population prior to program implementation with the same population following implementation. An alternative is to make comparisons between the target population and a similar population at the same time. This could be done by completely relying on cross-section information, comparing the level of the outcome between populations with and without program exposure. This approach requires that all confounding factors that differ among the populations be measured and included in the analysis. Because this strong requirement is seldom met, we prefer alternative methods whenever available.

An alternative is to combine both longitudinal and cross-sectional variation. This improves upon the simple longitudinal design presented above because changes over time in unmeasured confounding factors – e.g., economic conditions or health care access – are accounted for as long as they change in the same way in both the target and non-target population. However, if these unmeasured confounding factors change in ways that differ between the target and comparison populations, then this method can lead to erroneous inferences.

We make use of this type of analysis in two circumstances. We use this type of analysis for within-state comparisons between areas with and without program activity and among areas of varying levels of program activity. We also use it to compare outcomes in Arkansas with outcomes in other states.

Figure 11.1 presents the first type of analysis comparing teen pregnancy trends in Delta counties with trends in the rest of the state in order to evaluate the effect of Delta programs to prevent teen pregnancy. In this type of analysis a similar estimation to that presented in Table A.2 is performed using a sample that combines the treatment population (i.e. teenage women in Delta counties) and the comparison population (i.e. teenage women in other counties). Separate trend lines are fit for the two populations and a kink in each trend is permitted at the time of program initiation. It is possible that the trend in the comparison population might turn more positive or more negative at the time of program initiation for reasons unrelated to the program – e.g. unmeasured changes in the availability of contraception throughout the state. In fact, as shown in Figure 11.1, the trend in the comparison area does become more negative at the time of program implementation in the Delta. The trend in the Delta also becomes more negative, but by a similar amount to the trend in the comparison area. Therefore, we conclude that the change in the trend in the Delta is due to factors that are affecting the entire state rather than efforts that are specific to the Delta. This conclusion is supported by a hypothesis test of the null hypothesis that the Delta trend does not change at the time of program implementation by a different amount than the change in the trend elsewhere.

Another type of comparative analysis is to compare outcomes in Arkansas with outcomes in other states. We do this by performing an analysis similar to that presented in A.2 only using information on all respondents to the BRFSS for Arkansas and the six surrounding states from 1996 through 2003. Our assumption is that if unobserved factors such as national and regional advertising campaigns by cigarette companies and anti-smoking groups have a similar affect

throughout the region, then smoking prevalence in Arkansas will change in a similar way as smoking prevalence in the surrounding states. Any divergence between Arkansas and the surrounding states can be attributed to differences in tobacco control programming and cigarette taxes. We track these two factors and control for demographic factors. The results are presented in Figure 10.11.

Other Analyses

The above section describes the analysis of data that contain outcomes information at the individual level. We also perform analyses at the county or state levels. Our analysis of teen pregnancy and cigarette sales require the event counts from outcome data sources to be combined with population counts from census data. The rates formed from combining these data sources are for particular subpopulations such as targeted age groups or counties with varying levels of program effort. Trends in these rates are analyzed in a similar fashion to that described above. That is, we look for changes in the trends in these rates following program initiation and compare changes in trends between areas with varying levels of program activity. Unlike the analyses of individual data, the analyses of subgroup rates does not control for changing demographic characteristics. These subgroup rate analyses are presented in Figures 10.4 and 11.1.

Appendix B
Expenditures for Individual Centers on Aging

Table B.1 Expenditures of the Arkansas Aging Initiative, by Center and Fiscal Year

	FY2002	FY2003	FY2004	FY2005 (half-year)*
Central Administration				
(1) Regular salaries	$192,238	$219,907	$195,717	$102,518
(2) Personal service matching	37,935	47,227	40,250	22,829
(3) Maintenance & operation				
(A) Operating expense	-4,524	20,850	17,680	5,435
(B) Conference & travel	3,290	7,732	5,352	1,120
(C) Professional fees	0	0	449	0
(D) Capacity outlay	4,900	128,459	0	0
(E) Data processing	0	0	0	0
Schmieding				
(1) Regular salaries	17,291	132,984	149,427	77,041
(2) Personal service matching	3,345	30,491	36,989	19,869
(3) Maintenance & operation				
(A) Operating expense	3,500	44,680	38,057	3,578
(B) Conference & travel	0	4,758	1,611	0
(C) Professional fees	0	0	0	0
(D) Capacity outlay	0	0	3,754	0
(E) Data processing	0	0	0	0
SACOA				
(1) Regular salaries	144,389	92,510	121,503	65,752
(2) Personal service matching	25,757	23,098	31,537	15,532
(3) Maintenance & operation				
(A) Operating expense	20,790	93,684	47,289	14,906
(B) Conference & travel	4,862	3,387	4,285	3,337
(C) Professional fees	0	0	0	0
(D) Capacity outlay	47,328	4,989	5,995	0
(E) Data processing	0	0	0	0
COA Northeast				
(1) Regular salaries/(2) Personal service matching	30,693	211,821	192,676	98,871
(3) Maintenance & operation				
(A) Operating expense	3,512	26,163	47,996	14,390
(B) Conference & travel	1,821	2,866	2,222	345
(C) Professional fees	0	0	0	0
(D) Capacity outlay	38,917	2,931	7,107	0
(E) Data processing	0	0	0	0
TX COA				
(1) Regular salaries/(2) Personal service matching	29,226	169,136	168,398	86,010
(3) Maintenance & operation				
(A) Operating expense	11,465	53,353	33,898	2,486
(B) Conference & travel	613	13,891	2,686	0
(C) Professional fees	0	0	0	0
(D) Capacity outlay	33,693	7,496	0	0
(E) Data processing	0	0	0	0

* represents spending through December 31, 2004

** Large increase in 4th quarter salaries due to tradeoff with AHEC

Table B.1 (cont) Expenditures of the Arkansas Aging Initiative, by Center and Fiscal Year

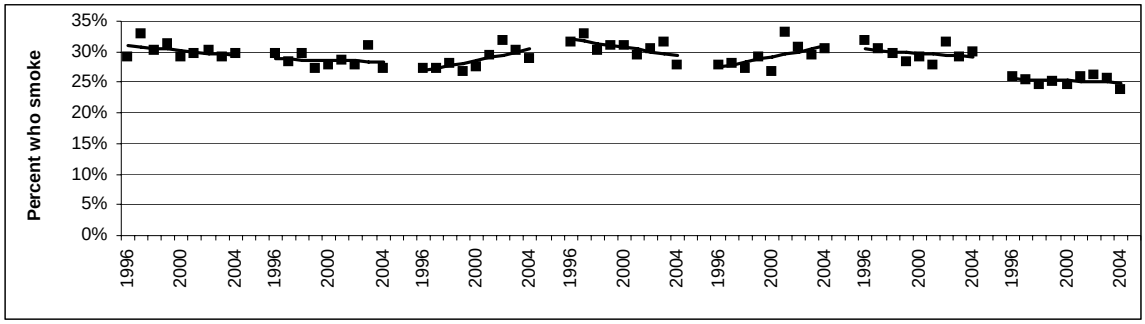
	FY2002	FY2003	FY2004	FY2005 (half-year)*
Helena				
(1) Regular salaries	9,408	20,833	70,543	32,788
(2) Personal service matching	1,610	3,549	13,234	5,842
(3) Maintenance & operation				
(A) Operating expense	13,054	41,732	21,106	16,872
(B) Conference & travel	0	455	6,455	2,067
(C) Professional fees	0	0	0	0
(D) Capacity outlay	0	63,673	1,218	0
(E) Data processing	0	0	0	0
SCCOA				
(1) Regular salaries	0	138,168	152,639	79,496
(2) Personal service matching	0	27,982	30,841	15,975
(3) Maintenance & operation				
(A) Operating expense	0	44,083	53,183	7,428
(B) Conference & travel	0	1,790	1,384	0
(C) Professional fees	0	0	0	0
(D) Capacity outlay	0	42,740	5,886	0
(E) Data processing	0	0	0	0
Fort Smith				
(1) Regular salaries	0	106,589	122,449**	37,787
(2) Personal service matching	0	23,372	26,400	9,153
(3) Maintenance & operation				
(A) Operating expense	0	25,450	21,287	25,543
(B) Conference & travel	0	0	1,288	0
(C) Professional fees	0	0	0	150
(D) Capacity outlay	0	21,411	11,934	0
(E) Data processing	0	0	5,985	331
Evaluation				
(1) Regular salaries		63,363	8,269	4,977
(2) Personal service matching		12,566	1,174	1,214
(3) Maintenance & operation				
(A) Operating expense	0	303	0	46
(B) Conference & travel	0	479	0	0
(C) Professional fees	0	0	0	83,333
(D) Capacity outlay	0	0	0	0
(E) Data processing	0	0	0	0

* represents spending through December 31, 2004

** Large increase in 4th quarter salaries due to tradeoff with AHEC

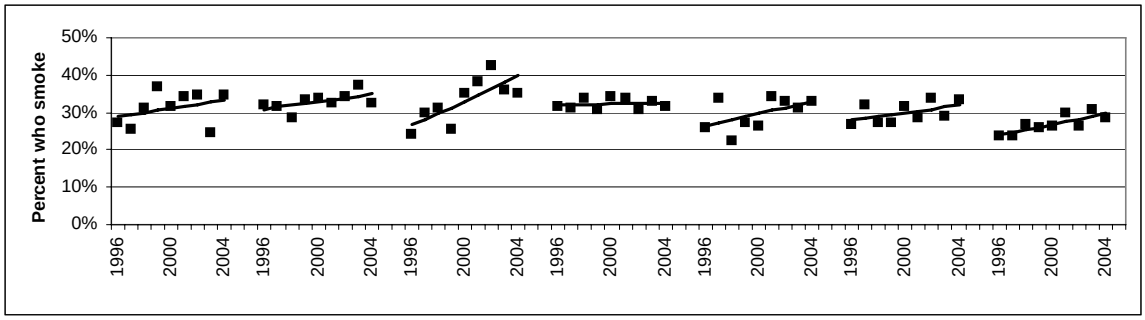
Appendix C
Smoking Prevalence, Cigarette Taxes, and Tobacco Control Spending in Arkansas and Individual Surrounding States

Adult smoking prevalence



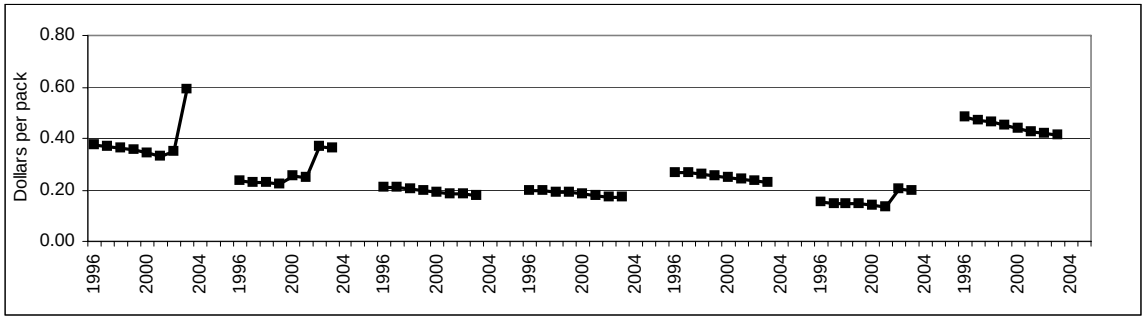
AR LA MS MO OK TN TX

Young adult smoking prevalence, ages 18 through 25



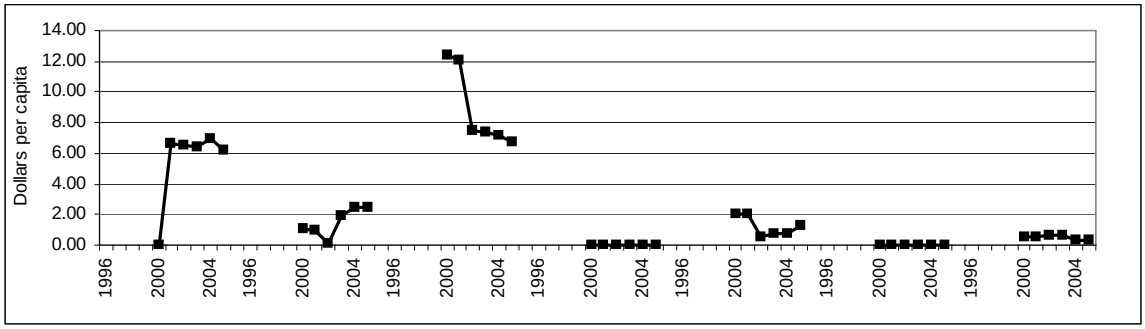
AR LA MS MO OK TN TX

Cigarette tax rate



AR LA MS MO OK TN TX

Spending on tobacco control



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Appendix D
Using *Journal Impact Factors* to Predict the Future Impact of the Research Programs

WHAT ARE JOURNAL IMPACT FACTORS?

According to an essay from the company that produces Journal Impact Factors (JIF),[21] they are

> "a measure of the frequency with which the "average article" in a journal has been cited in a particular year or period. The annual [JIF] is a ratio between citations and recent citable items published. Thus, the impact factor of a journal is calculated by dividing the number of current year citations to the source items published in that journal during the previous two years."

In short, the JIF for a journal is the rate at which the journal's recent articles are cited. Therefore, they provide a good predictor of the influence that a publication in that journal is likely to have on its field. They have been used to evaluate the merit of scientific efforts[22] but they have also been the subject of considerable criticism because of improper use.[23]

In this appendix, we review the strengths and weaknesses of JIFs. We also discuss the implications of these issues for possible use of JIFs to evaluate the quality of Tobacco Settlement-funded research by scientists at the ABI and COPH , for the purpose of assessing the potential of this research to lead eventually to improvements in the health status of Arkansans.

WHAT ARE THE ADVANTAGES OF JIFS?

JIFs are leading indicators.

We need to obtain timely measures of the quality of tobacco settlement funded research. Although we would like to know the effect of the funded research on health, or even whether an individual article that disseminates the findings of a funded research project is well received and highly cited, this information would not be available until well into the future. Waiting for such a record to be accumulated would prevent any mid-course correction to funding strategies.

Instead we can use the citation record of the journals in which funded research is being published. Historically, the citation records of articles published over the previous two years

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21 The Impact Factor, originally published in the Current Contents print editions June 20, 1994. Available on-line at http://www.isinet.com/essays/journalcitationreports/7.html/. Referenced February 11, 2005.

22 The Use of Journal Impact Factors and Citation Analysis for Evaluation of Science. Presented at the 41st Annual Meeting of the Council of Biology Editors, Salt Lake City, UT, 1998 by Eugene Garfield. Available on-line at http://www.garfield.library.upenn.edu/papers/eval_of_science_CBE(Utah).html. Referenced February 11, 2005.

23 Why the impact factor of journals should not be used for evaluating research. by Seglen PO. BMJ 1997;314:497 (15 February) Available on-line at http://bmj.bmjjournals.com/cgi/content/full/ 314/7079/497. Referenced February 11, 2005. The journal "impact factor": a misnamed, misleading, misused measure. By Hecht F ; Hecht BK ; Sandberg AA. Cancer Genet Cytogenet (Cancer genetics and cytogenetics.) 1998 Jul 15; 104(2): 77-81.

have provided a good prediction of future citation rates. This allows us to estimate at the time of publication the amount of citations an article will receive rather than waiting for the citations to accrue.

JIFs predict citation rates, which are indicators of research quality, importance and influence.

Research, by its nature, has an indirect impact on health. Most research, especially basic research in the sciences, is an early building block in developing health care policies and treatments that will improve the wellbeing of Arkansans. For a specific research project to have an impact, it must be built upon by other researchers and practitioners. The number of citations for published research papers measures the degree to which research projects are contributing to this process.

JIFs are relatively objective.

The publishers of the JIFs, the Institute for Scientific Information, documents the process of creating JIFs. Although there are some subjective aspects to choosing which journals to include in their indices, the value of the JIF is largely determined by the objective process of counting citations. Of course, the decision to cite an article is a subjective decision by other researchers, but the JIF itself just summarizes these decisions being made by researchers in the field. This mechanical evaluation tool provides a good complement to more subjective evaluation tools such as expert review of scientific merit of individual projects.

JIFs are quantitative.

Since JIFs are based on counts of citations, they lend themselves to quantitative analysis. Whether the JIF itself is reported or JIFs are used to rank journals in specific academic field, the numerical quality of JIFs makes them easy to use for calculating comparisons, trends, rankings, and other measures.

JIFs are easily accessible at no cost.

A major advantage of JIFs is that they are available at virtually no cost. JIFs are produced and published by the Institute for Scientific Information. Like most major research universities, UAMS subscribes to the ISI databases. The only cost of using JIF as an evaluation tool is the time it takes to access this database over the internet and look up the journals containing articles produced by funded research projects.

WHAT ARE THE LIMITATIONS OF JIFS?

JIFs are not available for all journals or for other publication venues.

According to Kurmis (2003), only roughly 5000 of the estimated 126,000 journals in the world are included when calculating the JIF.[24] Furthermore, many research projects disseminate

[24] Understanding the limitations of the journal impact factor by Andrew P Kurmis, *Journal of Bone and Joint Surgery;* Dec 2003; 85, 12; pg. 2449

their findings through other venues such as books, reports to sponsors, briefings to agencies, and a variety of popular media. The value of the JIF, therefore, rests on the presumption that the 5000 journals indexed by ISI are of central importance to their fields and that publication in scholarly journals holds a preeminent place in the process of translating basic research into policy and clinical interventions that will improve health in Arkansas.

Our review of the journals indexed by ISI in the fields with which we are most familiar confirms the first presumption regarding the status of journals. The need for the funded research programs to publish in scholarly journals will differ somewhat by field. We expect that some of the community based participatory research of the COPH will have other important venues, but we think that JIF will measure the quality of the portion of its research that is intended to influence health outcomes by influencing the direction of health policy research and health services research.

JIFs are biased towards English-language publications.

One of the most frequent criticisms that is levied against using the JIF to evaluate the quality of research production by a research organization is that it is biased toward English language publications (See, for example, Seglen, 1997). Indeed, the JIF has been used to make funding decisions in Eastern Europe, where this bias should be a major concern. While this would be a concern if we were comparing research units from from non-English speaking areas to those in the US, this is not a concern for our analysis of the trends in research quality in Arkansas.

JIFs are not useful for comparing journals on different subjects.

JIFs differ substantially among academic fields. The top journals for some fields have JIFs that are ten times as large as those for the top journals in other fields. This occurs both because some fields are larger than others, so the top articles in the top journals are cited by many more authors, and because citation patterns differ among fields. In clinical fields, it is not uncommon to cite dozens to more than one hundred previous studies, whereas articles in some basic science fields may only site a few seminal articles.

For this reason, we expect to report only the annual average JIF for funded research projects separately by field. The JIF for top journals within a field stays relatively constant over time, so tracking the JIF for projects within a field should provide a useful measure of the trend in quality.

In order to aggregate across fields to create a useful measure for each program (ABI and COPH), JIFs can be used to rank the journals in each field and then count the number of articles published in ‘top five’ journals and ‘top ten’ journals. This gives relatively more credit to publications in small fields with low citation rates. For example, publishing in a top ten journal in Food Science & Technology, with top ten journals having an average JIF of 2.07, would be given the same credit as publishing in the top ten journals in Immunology with top ten journals having an average JIF of 16.78.

JIFs do not account for the skewed distribution of citations. In particular, publishing in a journal with highly cited articles does not guarantee that your article will be highly cited.

Critics have noted that citation rates are highly skewed, which means that a few path-breaking articles get cited thousands of times while most other articles get cited very rarely. It may be the case that journals with high JIFs have a few more path-breaking articles but the bulk of the articles are no more highly cited than articles in journals with lower JIFs.

While this is true, we think that this argument is missing the point. Publishing an article in a high-JIF journal indicates that the publisher thinks that this article has a chance at becoming one of the path-breaking articles. High JIF journals tend to have more submissions and the review panel for the journal is performing an evaluation of the scientific merit of the article and its likely impact. We are making use of that expert prediction for our evaluation. Only after time passes, will we know whether a particular article is path-breaking or otherwise; in the meantime, the JIF is our best predictor.

JIFs give too much credit to journals that publish review articles since these get frequently cited.

Academic fields frequently have one or two journals that publish review articles that provide overviews of the field. These articles are cited by many other research papers to avoid including a review of the field in each study. To the extent that these journals are respected journals within the field, this should not lead to a serious bias.

JIFs are not as good as doing an in-depth review of scientific merit and should not be used as the sole criteria of scientific merit.

Others have criticized the use of JIFs in promotion and tenure decisions and funding decisions for individual researchers and research projects. We agree that in individual cases, the imprecision of JIF for the reasons cited above make them a very poor substitute for evaluating a specific person or project. However, the imprecision is reduced by averaging over a large number of research publications, thus making JIFs more useful in aggregate than for individuals. Furthermore, the cost of in-depth scientific review of the large number of projects for our purposes is prohibitive. However, we emphasize that JIFs are only one measure of program outcomes and should be always be reported in the context of the other measures used to assess programs' impacts.

Using JIFs as a measure can create distortions if decisions are based on JIF rather than on scientific merit.

The articles cited above express concern that focusing on JIFs can lead to distortions at many steps in the scientific process. Journal editors can adjust their format to increase their JIF by including more review articles and encouraging authors to cite earlier articles in the same journal. Academic units and individual scientists can face pressure to shift their research emphases toward subjects with higher average JIFs. We think that the distortions for the decisions made by editors regarding how to structure their journals are much more severe than for decisions made by researchers, since JIFs are just one of the criteria by which researchers are judged while JIFs are much more central to the prestige and economic success of a journal.

The incentives for researcher decisions – success within the academic labor market, prestige within their community of peers, funding from external sources – should be sufficiently diffuse that our use of the JIF to measure the success of the funded programs will have a negligible influence on the scientific process. Furthermore, the influence of JIFs on editors' decisions should not bias our evaluation. Although the ability of some editors to inflate their JIFs will make this measure less precise than it otherwise would be, there is no reason to believe that it will impart a systematic bias that will cause our measures to overstate or understate the quality of COPH or ABI research.

DISCUSSION

JIFs are a good predictor of the future impact of research publications that should complement the other outcome measures for the COPH and ABI that we describe in Chapter 11. JIFs are available at a reasonable cost, and many of the criticisms levied against JIFs in other contexts do not pertain to this application. We think that following the trends in JIFs within subject and tracking the number of articles in top journals, ranked by JIF within subject, would be a useful addition to our evaluation. In consultation with the COPH and ABI, we are working carefully in the exploration and formulation of JIF-based measures that are valid and reliable for the scope of research each of the programs is performing. In addition, as stated above, these measures will be only one of the measures used to assess program effects, and they will be interpreted in the broader context of each program's full set of outcome measures.

Appendix E
Long-Term Goals in the Initiated Act, Proposed Goals and Outcome Measures for the Tobacco Settlement Programs

Proposed Long-Term Goals	Planned Outcome Measures
Tobacco prevention and cessation – Surveys demonstrate a reduction in numbers of Arkansans who smoke and/or use tobacco.	
1. For the school programs, achieve at least a 75 percent compliance rate with the CDC guidelines for school programs on tobacco prevention and cessation. 5. Establish a state network of smoking cessation programs across the state with coverage such that people do not have to travel more than one hour to access a program (provided that funding is available). 6. Establish and maintain a mix of ads in the media campaign that emphasizes restricting smoking in public places (i.e., clean air) and smoking cessation in a 2:1 ratio. 7. By 2008, 25 percent of all Arkansans will live in communities that have legislated smoke-free environments that exceed levels of bans established by state legislation. 8. By 2008, 75 percent of Arkansas worksites will have a smoke-free workplace policy as assessed by the Census Bureau's Current Population Survey (CPS).	Percentage of people who smoke among: • All adults • Pregnant women • Young adults age 18-24 • Pregnant teenagers Attitudes toward smoking Sales of tobacco products to minors Total tobacco sales Geographic variations in smoking patterns
College of Public Health – Elevate the overall ranking of the health status of Arkansas	
a. Establish doctoral programs in three areas by 2007-08. b. Establish staffing of a minimum of five faculty for each of the three doctoral programs c. Increase distance-accessible education. 4. Increase outside grant funding for research by 20 percent above 2004-05.	Characteristics of extramural funding • Rigorous peer-review • Community collaboration • Funding external to state Geographic distribution of graduates Journal impact factors (in planning) Exemplary project analysis

Proposed Long-Term Goals	Planned Outcome Measures
Delta Area Health Education Center – Increase the access to a primary care provider in underserved communities.	
1. Expand consumer health education activities that address the region's health problems. a. Programs will be operating out of new Delta AHEC building by Spring 2006. b. Expand consumer health education services 20 percent by 2010. 2. Improve program evaluation activities. a. Data collection and analyses will be automated by Spring 2007. b. Conduct annual program improvement processes, including monitoring programs for culturally appropriate content through 2010. 3. Implement a marketing program for the Delta AHEC. a. By Spring 2006, establish a marketing committee, identify a staff person to implement program, develop strategies to recruit health professional students, engage and educate health care professionals, and promote consumer health education activities. b. Implement and maintain marketing program and annual fundraising through 2010. 4. Become a provider of nursing continuing education by Spring 2010. a. By Spring 2006, identify program staff and complete a needs assessment (i.e., location, method of delivery, job role, educational background). b. Complete accreditation process, and system for processing paperwork by 2007. c. Introduce course offerings in 2007 and maintain through 2010.	Teen pregnancy rates Hospitalization rates for diabetes Other measures still under development
Arkansas Aging Initiative – Improve health status and decrease death rates of elderly Arkansans, as well as obtaining federal and philanthropic grant funding.	
1. By June 2006, have an established strategic plan for implementation of at least one geriatric best practice guideline in at least three Senior Health Centers. 2. Offer at least eight opportunities for professional education as guided by the needs assessment and at least one program per county for older adults and their families in collaboration with community partners by June of 2006. 3. By June of 2006, the Aging Initiative will have developed and implemented a uniform database for tracking participants in AAI educational encounters. 4. By June of 2006, work toward influencing health and social policy by compiling a list of grants, foundations and independent organizations that provide research funding and they will develop a database that will be updated periodically to keep this list current.	Ambulatory-care sensitive avoidable hospitalizations Client satisfaction with health services Client satisfaction with educational services Change in physical and cognitive function of elders (being planned)

Proposed Long-Term Goals	Planned Outcome Measures
Minority Health Initiative – Reduce death/disability due to tobacco-related illnesses of Arkansans	
1. Continue needs assessment activities to help inform health needs and policy recommendations for minority populations in Arkansas. a. Perform costs analyses for a comprehensive statewide health telephone survey by Fall 2005; then identify stakeholders and potential funding sources by Winter 2005/2006 and submit application for funding by the end of 2005. b. Conduct and analyze statewide comprehensive health telephone survey of Arkansans by Fall 2009 with over sampling of minority subpopulations. 2. Increase awareness and education activities to reach Hispanic populations by including Spanish subtitles to all MH Today TV shows by Spring 2007 and developing a cookbook, collaterals for Hispanic population by 2008. 3. Expand current intervention activities a. Increase enrollment in the CHC-based Hypertension Treatment Initiative by 5 percent annually within each participating county, based on the enrollment numbers at the end of the previous fiscal year. b. Expand Eating and Moving for Life Initiative to 10 counties by 2010 4. Increase external funding by: a. 5 percent in Spring 2006 b. 10 percent annually in following years (Spring 2007-2010)	Eating and Moving for Life Initiative • Number completing program • Average change in weight • Reduction in blood pressure Hypertension Initiative • Reduction in blood pressure Hospitalization rates for: • Hypertension • Congestive heart failure • Diabetes • Stroke • Acute myocardial infarction
Arkansas Biosciences Institute – Research results should translate into commercial, alternate technological, and other applications wherever appropriate in order that the research results may be applied to the planning, implementation and evaluation of any health related programs in the state. The institute is also to obtain federal and philanthropic grant funding	
1. Maintain current level of total grant funding (as of FY2005). 2. Increase applied research that will have community impacts and increase collaboration with local businesses. 3. Bring ABI scientific and research capabilities to pilot or community-based programs.	Characteristics of extramural funding • Rigorous peer-review • Funding external to state Geographic distribution of graduates Journal impact factors (in planning) Number of patents issued to researchers Exemplary project analysis

Proposed Long-Term Goals	Planned Outcome Measures
Medicaid Expansion – Demonstrate improved health and reduced long-term health costs of Medicaid eligible persons participating in the expanded programs.	
1. Beneficiaries currently enrolled in the AR-Seniors program will utilize services at the same or higher levels as the average dually-eligible beneficiary not enrolled in the AR-Seniors program. 2. Beneficiaries currently enrolled in the Pregnant Women's Expansion Program will utilize services at the same or higher levels as the average pregnant Medicaid beneficiary not enrolled in the Pregnant Women's Expansion program. 3. Enrollment in the AR-Seniors program will increase by 10 percent. 4. Enrollment in the Pregnant Women's Expansion Program will increase by 15 percent.	For pregnant women benefits: • Use of prenatal care • Birth weight of newborns • Smoking during pregnancy Amount of hospital use by recipients Ambulatory-care sensitive avoidable hospitalizations

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