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Evaluation of the Arkansas Tobacco Settlement Program

Progress Through 2011 – Summary

John Engberg, Deborah M. Scharf, Susan L. Lovejoy, Hao Yu, Shannah Tharp-Taylor

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In November 1998, U.S. states and the major tobacco companies ended years of prolonged legal disputes by signing the Master Settlement Agreement (MSA). Under the terms of the agreement, the tobacco companies agreed to pay participating states more than \$206 billion over 25 years. Arkansas's share of these payments is .828 percent, approximately \$1.7 billion, which the state has been receiving since 2000.

Unique among the states, in Arkansas a commitment was made by both elected officials and the general public to invest its share of the MSA funds in health-related programs. The Tobacco Settlement Proceeds Act, a referendum passed by more than 65 percent of Arkansans in the November 2000 election (henceforth called the Initiated Act), established a comprehensive program that uses the MSA funds to invest in the health of Arkansans.

The Initiated Act created the Arkansas Tobacco Settlement Commission (ATSC), which is responsible for monitoring and evaluating the performance of the funded programs. To help carry out this evaluation function, the ATSC contracted with the RAND Corporation in 2002 to serve as an external evaluator. Since then, RAND conducted a comprehensive, ongoing evaluation of the progress made by the programs in fulfilling their missions and assessed the effects of these programs on smoking and other health-related outcomes. This report represents the fifth and final of RAND's evaluation reports.

This report should be of interest to national and state policymakers, health care researchers and providers, and others concerned with the effects of the tobacco settlement funds on the health of Arkansans. The research described in this report was sponsored by the Arkansas Tobacco Settlement Commission and was conducted in RAND Health, a unit of the RAND Corporation. We are grateful for the assistance and guidance of the ATSC and staff during the evaluation and the cooperation of the directors and staff of the seven funded programs. Their support derives from a commitment to objective evaluation and it adds value to our work. Within RAND, we are indebted to David Adamson for his draft of the executive summary; and Donna Farley, who served as project director for the first four years and has been an invaluable source of support throughout the project.

The Tobacco Settlement Proceeds Act

In Arkansas, the Initiated Act authorized the creation of seven programs to be supported by MSA funds, established short- and long-term goals for the performance of these programs, specified the funding shares to support the programs and a structure of funds for management and distribution of proceeds, and established the ATSC to oversee the overall initiative. Subsequent legislation slightly changed some of the goals and programs but maintained the original intentions.

The MSA imposed no restrictions on how states could spend their payments, and states have allocated them to a wide variety of activities. The people of Arkansas allocated the vast majority of MSA funds to seven programs intended to improve the state's health.

Goals and Funded Programs

The goals of the Initiated Act are to (1) reduce tobacco use and the resulting negative health and economic impacts; (2) expand access to health care, thereby improving the health of Arkansans; (3) develop new tobacco-related medical and agricultural research initiatives to improve access to new technologies, improve the health of Arkansans, and stabilize the economic security of Arkansas; and (4) improve the health care systems in Arkansas and access to health care delivery systems, thereby resolving critical deficiencies that negatively impact the health of the state's citizens. To address these goals, the act created the following seven programs:

- *Tobacco Prevention and Cessation Program (TPCP, 31.6 percent of annual funding).* Managed by the Department of Health, TPCP aims to reduce initiation of tobacco use and resulting negative health and economic impacts. TPCP uses the Centers for Disease Control and Prevention (CDC) recommendations for tobacco cessation and prevention activities in developing its programs.
- *Medicaid Expansion Programs (MEP, 29.8 percent).* The MEP seeks to expand access to health care

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Our intention is for ATSC and the programs to use this report to effectively build on their efforts to date.

through targeted expanded benefits packages that supplement the standard Arkansas Medicaid benefits. The programs are managed by the Arkansas Department of Human Services.

- *Arkansas Bioscience Institute (ABI, 22.8 percent)*. ABI works to develop new tobacco-related medical and agricultural research initiatives, improve the health of Arkansans, improve access to new technologies, and stabilize the economic security of the state. The Initiated Act provides for ABI to be funded through separate appropriations to the participating institutions. The program's management reports to the ABI board, which also was established by the Initiated Act.
- *College of Public Health (COPH, 5.2 percent)*. COPH is a resource to provide professional education, research, and services to the public health community of Arkansas. It is a unit of the University of Arkansas for Medical Sciences (UAMS).
- *Minority Health Initiative (MHI, 3.6 percent)*. MHI aims to identify the special health needs of Arkansas's minority communities and to establish health care services to address these needs. MHI is managed by the Arkansas Minority Health Commission (AMHC).
- *Delta Area Health Education Center (Delta AHEC, 3.5 percent)*. Delta AHEC is an additional unit in the statewide Arkansas AHEC system, which provides clinical education throughout the state. It was put into the Initiated Act to provide such services for the underserved and disproportionately poor Delta region of the state.
- *Arkansas Aging Initiative (AAI, 3.5 percent)*. AAI provides community-based health education for senior Arkansas residents through outreach to the elderly and educational services for professionals. It is housed in the Reynolds Center on Aging, a unit of UAMS.

One of these programs, TPCP, is dedicated to smoking prevention and cessation and receives one-third of the MSA funds. Most, though not all, of TPCP funds are available for smoking cessation and prevention efforts. Most of the other programs primarily serve the health-related needs of disadvantaged Arkansas residents (MEP, MHI, AAI, Delta AHEC); others are long-term investments in the public health and health research infrastructure (ABI, COPH).

In addition to identifying basic goals, the Initiated Act also defined performance indicators for each funded program with respect to program initiation and short- and long-term actions. In a previous

report¹ RAND reported that all programs had achieved their initiation goals and short-term goals.

Purpose of This Report

This report is the fifth and final from the RAND evaluation. It includes findings for fiscal years 2010 and 2011, as well as a look back over the past ten years. The report describes program funding and spending, the effects on outcomes, and related policy issues. Our intention is for ATSC and the programs to use this report and our earlier reports to better understand their progress toward improving the health of Arkansans and toward their other goals, so that they can effectively build on their efforts to date.

RAND's Approach to the Evaluation

RAND's approach in this phase of the evaluation cycle differed from that followed in earlier phases. RAND responded to ATSC's request for more limited data collection and a more streamlined report. Our findings draw on several data sources, including quarterly reports and spending and funding data compiled by ATSC and the seven funded programs. Also, the process by which RAND received program data differed from that followed for past reports in key ways. Specifically, quarterly report data were requested and collected by the commission, then forwarded to the RAND team electronically. Further, the commission narrowed the scope so that RAND no longer conducted update calls, quarterly program calls, or annual site visits with the seven programs. In the past, the evaluation team used these calls and visits to gain information that contributed to the narrative explanation of the programs' successes and challenges, and programs provided input to the iterative evaluation process through which RAND used the information to describe program implementation processes and to explain unexpected results.

As in prior phases, RAND used data provided by the programs to calculate unit costs for several program initiatives. This allowed RAND to detect trends over time and to compare the relative costs of the various initiatives that programs are implementing. However, some of the programs were unable to allocate expenditures to specific initiatives, and others, such as COPH and ABI, did not have discrete activities for which to calculate unit costs.

Also (as in the prior phases), RAND relied on secondary data sources to assess health-related out-

¹ Dana Schultz, Tamara Dubowitz, Susan L. Lovejoy, Shannah Tharp-Taylor, Hao Yu, and John Engberg, *Evaluation of the Arkansas Tobacco Settlement Program: Progress During 2006 and 2007*, Santa Monica, Calif.: RAND Corporation, TR-611-ATSC, 2008.

comes. These sources include national surveys plus state supplements for the Behavioral Risk Factor Surveillance System; U.S. Census data; data summaries from nonprofit organizations such as the American Lung Association, Campaign for Tobacco-Free Kids, and the United Healthcare Foundation; and statistics from the Arkansas Department of Health.

Tobacco Control Trends and Results

In the past decade, Arkansas made significant progress in its tobacco control policy. Key among these improvements are significant increases in cigarette and smokeless tobacco taxes in 2009. In addition, new smoke-free air legislation was passed that protects nonsmokers in workplaces and many bars and restaurants, students and employees of public post-secondary schools, and children in cars.

Tobacco-Related Outcomes

Tobacco use and health trends related to tobacco use improved significantly in the past decade. TPCP played a role in these improvements.

Smoking Prevalence. As shown by Figure 1, fewer Arkansans smoke now than a decade ago. *Among adults, smoking prevalence declined by 31 percent, decreasing the*

adult smoking rate from 26 percent in 2001 to 18 percent in 2010.

Figure 2 shows that smoking rates among young people and pregnant women also declined. One of the largest decreases occurred among high school students. *Only half as many Arkansas high school students smoke today compared with a decade ago.*

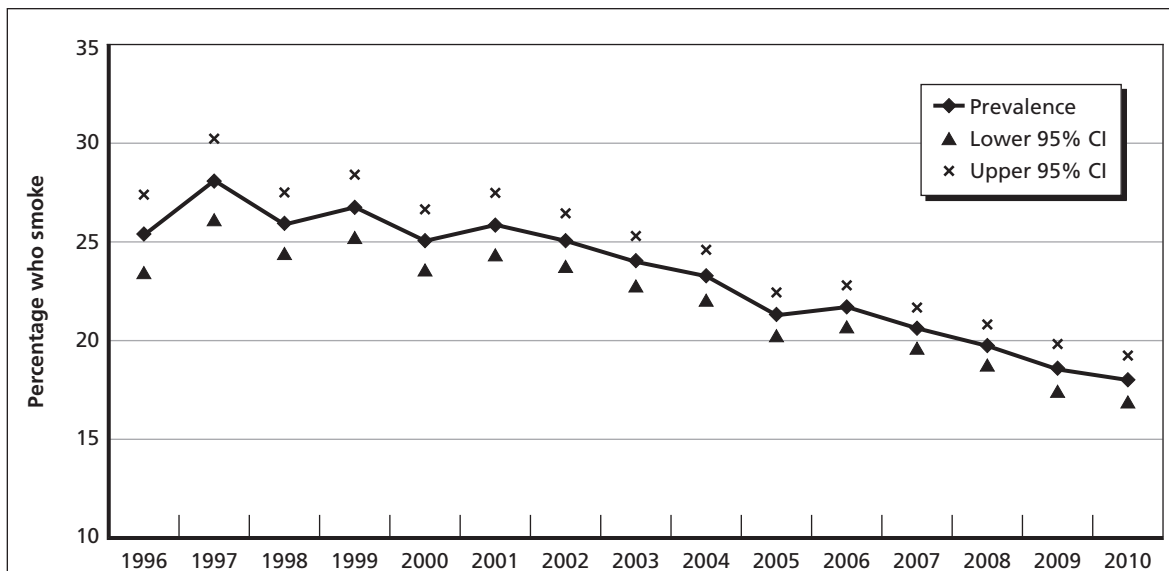
Figure 3 shows that Arkansas's smoking rate declined faster than the rate in the six neighboring states since the start of the programs in 2001 (after adjustment for differences in demographics among states and over time). This suggests that Arkansas's tobacco control programs are helping to reduce smoking rates. Although the most recent year, 2010, in Figure 3 suggests that the smoking rate increased even though rates for neighboring states continued to decline, the margin of error in these estimates is too large to make such a conclusion. However, recent reductions in prevention and cessation programming provide reasons to expect an end to Arkansas's progress in the battle against tobacco use, suggesting that these statistics should continue to be monitored.

Smoking and Health

With fewer smokers in the state and greater protections from secondhand smoke, changes in Arkansans'

Among adults, smoking prevalence declined by 31 percent.

Figure 1
Decline in Number of Adult Smokers in Arkansas, 1996–2010



SOURCE: RAND analysis of CDC Behavioral Risk Factor Surveillance System (BRFSS) micro data files, <http://www.cdc.gov/brfss>

NOTES: Decline in smoking from 2001 to 2010 is statistically significant (p -value < 0.05). This analysis of adult smoking rates accounts for the important design features of the BRFSS survey, including probability weights, as well as strata and sampling unit information. Including all these design features is of critical importance to make the sample representative of the entire state population. Many public sources (e.g., United Health Foundation, <http://www.americashealthrankings.org/Rankings>) do not use this information in their calculations and obtain different estimates. For example, United Health Foundation reports a 2010 smoking rate of 22% rather than the 18% used here. However, trend information is similar. CI is Confidence Interval.

Figure 2
Decline in Smoking Among Arkansas Youth and Pregnant Women, 2001–2011

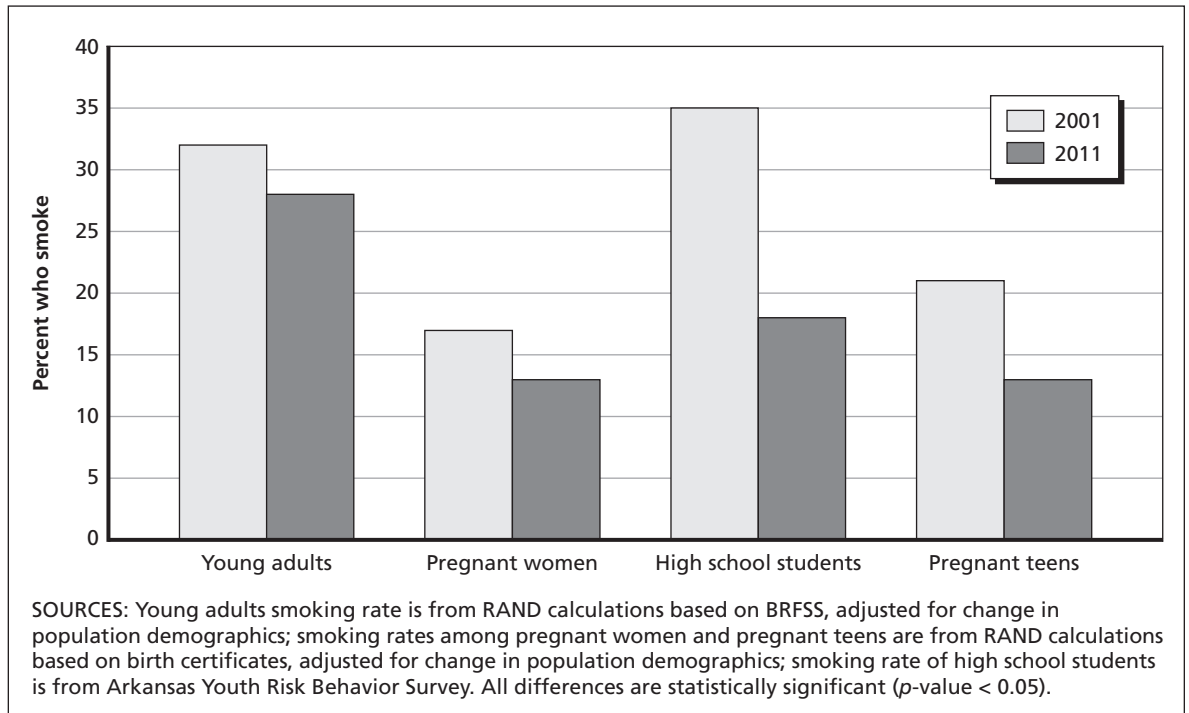
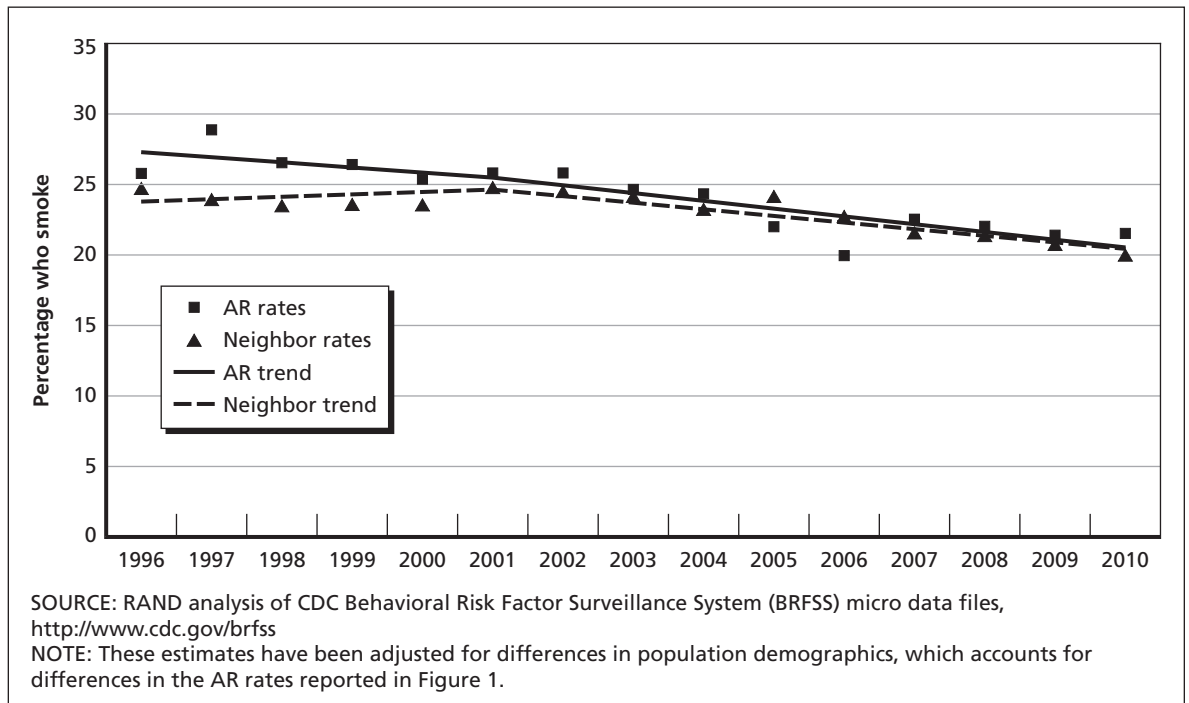


Figure 3
Smoking Rates and Trends in Arkansas and Its Six Neighboring States



health are expected to follow. Specifically, rates of diseases that respond quickly to changes in smoking prevalence, such as low-weight births, strokes and heart attacks, pulmonary conditions, asthma, and diabetes, should also decline.

In fact, hospital discharge data show that *recent reductions in statewide smoking rates may be helping to protect Arkansans from smoking-related disease*. In 2010, fewer Arkansans were hospitalized for strokes and heart attacks than in 2001 (Figure 4). The reduction in hospitalization for each of these two conditions is statistically significant. And although rates of asthma, diabetes, pneumonia, and low-weight births did not decrease significantly from 2001 levels, earlier uptrends in these diseases were slowed. In other words, programs have helped protect Arkansans from tobacco-related harm.

Despite these advances, tobacco continues to take a staggering toll on the state's health, well-being, and finances. Each year 4,900 Arkansans die from direct smoking, and 64,000 Arkansan children alive today will ultimately die from smoking-related causes. Given racial and ethnic disparities in tobacco use within the state, the smoking-related disease burden among some groups, such as non-Hispanic blacks, is likely on the rise. Arkansas's annual health care expenditures directly caused by tobacco use total \$812 million. Citizens spend \$627.7 million (\$558 per household) to cover smoking-related government costs each year. This equates to health costs and pro-

ductivity losses of \$9.65 per pack of cigarettes sold in the state². In 2010, 18 percent of adult Arkansans smoked cigarettes, and this rate is among the highest (5 of 50 states) in the nation.

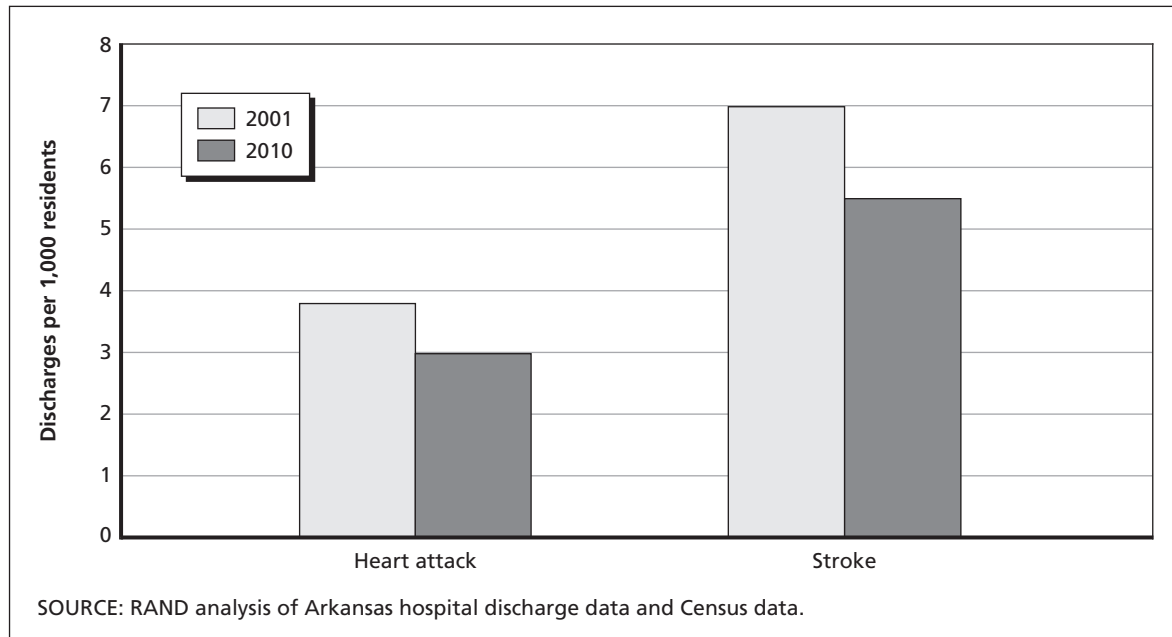
Nontobacco Health-Related Trends and Results

In 2001, Arkansas trailed the nation in many health measures, ranking 45 of 50 states on a composite score of all health outcomes. The Initiated Act dedicated more than two-thirds of Arkansas's share of the MSA funds to six nontobacco programs, each with specific goals for improving the health of Arkansans. In the past decade, Arkansas spent almost half a billion dollars on these efforts. Although this represents a sizable investment, it is a small fraction of what the Arkansas government spends on health care or the health care costs resulting from tobacco-related disease. Specifically, the Initiated Act's annual contribution to these six programs was approximately equal to 1 percent of annual Medicaid expenditures in Arkansas³ or equal to approximately 4 percent of the annual increased health care costs directly resulting from tobacco use in Arkansas. These investments have produced results in the past decade.

Despite these advances, tobacco continues to take a staggering toll on the state's health, well-being, and finances.

² Campaign for Tobacco Free Kids, "The Toll of Tobacco in Arkansas," 2011, http://www.tobaccofreekids.org/facts_issues/toll_us/arkansas
³ Kaiser Family Foundation, "State Health Facts: Medicaid and CHIP," 2012, <http://www.statehealthfacts.org/comparecat.jsp?cat=4&trgn=5&trgn=1>

Figure 4
Decrease in Heart Attacks and Strokes Among Arkansans After Program Implementation



The state's ranking in geographic disparity of health moved up 10 places.

Overall Health Status of Arkansans

Table 1 shows that Arkansas's health status remained virtually unchanged, according to the ranking of all health outcomes. Arkansas moved up one place from its ranking of 45 of 50 states in 2001. However, on another measure often used as a proxy for overall population health, infant mortality, Arkansas rose five places from 40 to 35 among the states. The state's ranking in geographic disparity of health moved up 10 places to above the median for states, which suggests that some of the racial and ethnic disparities have been mitigated. This also suggests that Arkansas made some progress on elevating the health status of all Arkansans, but there is much room for improvement.

Arkansas's progress on measures of specific health conditions was mixed. The state improved five places or more on rankings of individuals who report high cholesterol and obesity and in the rate of preterm births. The state retained the same poor ranking of those who report high blood pressure and the rate of low-birth-weight babies. On the other hand, the state's ranking of those reporting diabetes declined by six places to 33 among 50 states.

Overall, this suggests modest progress on most of the health measures that the MSA-funded programs, in one way or another, intended to improve.

**Table 1
Arkansas Health Ranking Among U.S. States**

Health Care Measure	Rank in 2011	Change from 2001
All Health Outcomes	44	+1
Premature death	46	0
Infant mortality	35	+5
Geographic disparities	20	+10
Specific Conditions		
High cholesterol	34	+10
Obesity	39	+8
Preterm birth	40	+5
High blood pressure	45	0
Low birth weight	44	0
Diabetes	33	-6
SOURCE: United Health Foundation, http://www.americashealthrankings.org/Rankings		

- Ranking improved five places or more.
- Ranking changed by fewer than five places.
- Ranking fell five places or more.

Access to Health Care

Several of the programs were poised to improve access to health care. However, MEP is the program with the most direct impact on this health building block. With major expansions in several areas, it received the most funding by far for this task. We examine three measures of health care access that align with three of the MEP expansions.

First, we examine whether expectant mothers in Arkansas are more likely to have early and adequate prenatal exams than in the past. Arkansas's rank went down by one place to 41 among the states. The expansion of Medicaid to fund services for more pregnant women was not adequate to raise Arkansas's place among the states.

The second measure is avoidable hospitalizations for seniors. MEP's program to expand Medicaid to all elderly below 80 percent of the federal poverty level (FPL) was intended to provide primary care services to the most disadvantaged elderly, thereby helping them avoid hospitalization for conditions better served through preventive and outpatient care. In addition, AAI clinical and educational programs are aimed at providing better access to primary care for the elderly. In spite of these efforts, the ranking of Arkansas for the rate of avoidable hospitalizations for Medicare beneficiaries, the vast majority of whom are elderly, slipped by one place to 45 by 2009.

The final measure of access directly related to MEP expansions is the percentage of the working-age population with health care coverage of any kind. The ARHealthNetworks Medicaid expansion to subsidize employer-based basic health insurance for employees of small businesses is aimed at decreasing the number of working-age adults without health care coverage. In spite of this effort, Arkansas fell by six places during the last decade to 49 of 50 states.

The success of the programs at addressing issues of access can also be tracked by examining changes in disparities that affect underserved populations within Arkansas over the decade. Table 2 shows that the changes in both the access measures and the percent overweight remained approximately the same for African-Americans and whites, except that increases in one of the access measures—the percentage of African-Americans tested for HIV/AIDS—improved much more than for whites. With respect to region, some disparities changed for the worse, while others changed for the better. The percentage of elderly in the Delta region who receive flu shots increased, but this percentage increased more rapidly in the rest of the state and now is approximately equal to the rate in the Delta region. On the other hand, the percentage

Table 2
Change in Disparities Within Arkansas by Race and Region

Health Care Measure	Race			Region		
	2010 African-American (%)	Change in African-American (%)	Change in White (%)	2009–2010 Delta Region (%)	Change in Delta Region (%)	Change in Non-Delta Region (%)
Adults prevented from seeing doctor due to cost	25.7	+7.0	+2.8	17.7	-0.3	+4.8
Adults received routine check-up in past two years	85.1	-4.1	-8.1	85.1	+39.7	+26.6
Adults received HIV/AIDS test	52.4	+39.6	+9.9	34.4	+20.6	+19.8
Adults (age 65+) received flu shot in past year	6.3	-2.1	-0.9	12.2	+9.7	+5.3
Adults overweight or obese	78.5	+6.0	+7.2	62.7	+12.6	+33.4

SOURCE: RAND analysis of CDC Behavioral Risk Factor Surveillance System (BRFSS) micro data files, <http://www.cdc.gov/brfss>

NOTES: Race percentages are for 2010 and the difference between 2000 and 2010 (except for the flu shot question, for which the percentages are for 2009 and the difference between 1999 and 2009). African-American and white are the only two race categories with sufficient sample sizes for reliable statistics. Region percentages are for 2009–2010 and the difference between 2000 and 2005 and 2009 and 2010. Multiple years are required in order to have a sufficient sample size for the Delta region. The Delta region includes Chicot, Crittenden, Desha, Lee, Monroe, Phillips, and St. Francis counties.

- Change in Arkansas percentage is better than U.S. change by statistically significant amount (p -value < 0.05).
- No statistically significant difference in Arkansas and U.S. changes.
- Change in Arkansas percentage is worse than U.S. change by statistically significant amount.

of adults in the Delta region who had a check-up rose faster and now exceeds that in the rest of the state. The percentage of adults who are overweight rose less rapidly than in the rest of the state, with the result that the rest of the state now has an equally high rate of 63 percent. On balance, these statistics echo the finding in geographic disparities in overall health outcomes presented above, which suggests improvement.

Healthy Behaviors

Virtually all of the programs are aimed at promoting healthy behaviors to some extent. However, four of the programs (COPH, AAI, MHI, and Delta AHEC) directly work to educate portions of the community in order to increase knowledge and skills that help them replace risky behaviors with healthy behaviors.

Table 3 provides information on the change in Arkansas’s ranking on a variety of healthy and risky behaviors. Of the rankings we examined, two remained relatively constant and four deteriorated by five places or more. A healthy diet that includes fruits and vegetables, which contain vitamins, minerals, and fiber, is protective against many diseases. Similarly, regular physical exercise is crucial for combating a wide variety of diseases from heart disease and diabetes to some cancers and depression. Therefore, the deterioration of these

Table 3
Arkansas Health Behavior Ranking Among U.S. States

Behavior	Rank in 2011	Change in Rank from 2001
Risky		
Binge drinking	6	+1
Teen birth rate	47	+1
Smoking	46	-6
Violent crime	41	-13
Healthy		
Diet: eating fruits or vegetables	40	-10
Exercise: within last 30 days	44	-14

- Ranking improved five places or more.
- Ranking changed by fewer than five places.
- Ranking fell five places or more.

rankings, that is, healthy diet and exercise, was not consistent with the goals of the funded programs. Furthermore, as a leading indicator of health outcomes, these results suggest that the prospects for future improvement in the state health ranking are not good.

The improved rankings presented in Table 1 suggest that Arkansas made more progress in overall health outcomes relative to other states. However, Arkansas's overall progress in health outcomes may be tenuous because its citizens are lagging behind in preventive health behaviors (see Table S.3) that could contribute to an increase in future rates of disability and disease.

federal research funding in sciences and health by a much faster rate than its neighbors or the nation as a whole, although it remains at less than half the national average in per capita annual federal research funding. Although it is difficult to measure precisely how much ABI affected the state's economy, median weekly earnings for the state as a whole and the percentage of state residents employed in scientific research or other professional and technical services did not change appreciably over the decade. As ABI research findings are further disseminated and as the technologies it develops are adopted, the contributions of specific Arkansas research projects to the health of Arkansans and to the Arkansas economy should be easier to measure.

The *Fay W. Boozman College of Public Health* was created with MSA funds to fill a gap in the offerings of the UAMS. It receives approximately 5 percent of the annual MSA allocation, which it uses to train a diverse public health workforce for the state and to conduct research. Over the decade, it gained accreditation and continued to expand its research and teaching capacity. It dramatically increased its other sources of funding, in part, by fully spending and successfully leveraging its MSA funds. At the end of its first decade, COPH is tied for thirtieth in the *U.S. News and World Report* rankings⁴. Although signs indicate that COPH was very successful in fulfilling its mission, the long-term goal specified for COPH in the Initiated Act of elevating "the overall ranking of the health status of Arkansas" has not yet been attained.

The *Minority Health Initiative* was created with the short-term goal of prioritizing health problems and planned interventions for Arkansas's minority population and increasing the number of Arkansans screened and treated for tobacco-related illnesses. Through several changes in management and other course corrections during the decade, MHI settled on a strategy of performing health screenings through various outreach programs and funding pilot programs directed at improving minority health. It also monitors and advocates for health policy changes that will help minorities and it contributes relevant research. MHI wrestled with financial management issues, including keeping unit costs of screening and testing efforts in a reasonable range; it finally managed to fully use its resources for the intended purposes. However, MHI has yet to return to the levels of health screening activity that it provided in previous years. There has been no improvement in four of five measures in the racial disparity of health that we

⁴ *US News and World Report*, "Graduate School Rankings: Colleges of Public Health," 2012.

Arkansas's overall progress in health outcomes may be tenuous because its citizens are lagging behind in preventive health behaviors.

Specific Program Results

We found that the *Medicaid Expansion Program* dramatically increased enrollment and spending since the inception of its subsidized private insurance program for low-income employees of small business (ARHealthNetworks) in 2007. Spending and enrollment for the other three expansions, which target health care for pregnant women and low-income elderly and reduction of hospital costs for very short and very long hospital stays, remained relatively flat throughout the decade. Medicaid recently implemented a new web-based enrollment system and is working with the state's AHECS on mobile outreach. Other outreach efforts for these three programs that were scaled up in recent years have now been suspended due to budgetary concerns, although we have demonstrated in previous reports that the programs are not fully meeting the needs of their target populations.

Despite these efforts, Arkansas's rankings in measures related to these efforts—adequate prenatal care, avoidable hospitalizations for Medicare beneficiaries, and health care coverage for the working-age population—did not improve over the decade. Overall, MEP spent less than 50 percent of its allocated share of MSA funds over the past five years (prior to fiscal year 2011) on the intended expansion programs. MEP's efforts to balance the increasing cost of health care with fluctuations in program enrollment should be monitored in order to determine whether MEP actually does spend the resources dedicated to it by the Initiated Act on increasing medical care for the intended segments of the state's disadvantaged population.

The *Arkansas Biosciences Institute* successfully used its MSA funding to attract additional research funding to the state and to produce a substantial body of research that has been published in scholarly journals. The institute was also faithful to its twin missions of training students from throughout Arkansas in bioscience research methods and of advising policymakers and the public in areas of its expertise. Through the decade, Arkansas increased its level of

examined. However, Arkansas's racial disparities in HIV/AIDS testing improved over the decade, which is consistent with one of MHI's main goals.

Throughout the decade, *Delta Area Health Education Center* became a full-service health education center for the people of Arkansas's Delta region. Designed to increase health care access and to provide health education to the population and to health professionals, it consistently used its resources and annually increased the number of encounters with citizens and professionals. Following a trend of successful fund raising, in 2011 Delta AHEC received 42 percent of its funding from non-MSA sources—its highest level of non-MSA funding to date. Delta AHEC struggled to bring health professionals to the region; however, in 2012 it successfully partnered with the UAMS Family Medicine Residency Program to bring first-year family medicine residents to Helena in Phillips County for one-month rotations. Further, it sharpened its focus on encouraging local school-age children to consider health careers as a new strategy to grow its local health care workforce. There was significant improvement in geographical health disparities, which is a testament to Delta AHEC's impact on the region's health.

The *Arkansas Aging Initiative* benefited from strong and consistent leadership to leverage high-quality health care for the state's elderly and to help educate health care professionals of all types in elder care. It successfully influenced public policy and collaborated with researchers throughout the state to improve the health status of elders. It now has a national presence among elder health leaders, and AAI's model is being replicated elsewhere in the country. Despite these successes, Arkansas's ranking of avoidable hospitalizations for Medicare beneficiaries did not appreciably improve during the decade.

Recommendations and Concluding Observations

In the past decade, Arkansas saw significant improvement in several key areas of tobacco control and cor-

responding improvements in tobacco-related health outcomes. However, in order to become a national leader in tobacco control, Arkansas could take several additional steps, including the following:

- Further raise state taxes on cigarettes and other tobacco products (including smokeless tobacco) to meet or exceed the national average.
- Broaden its smoke-free air laws. For instance, Arkansas could ban (and not just restrict) smoking in restaurants and bars catering to adult clientele.
- Implement smoking bans in public and multiunit housing.
- Expand and strengthen existing community-level bans on smoking in recreational spaces, such as parks and zoos, by making such laws applicable statewide. As other nicotine-delivery systems become more widely available (e.g., electronic, or e-cigarettes), Arkansas may consider adding these devices to existing smoke-free legislation. Careful oversight of these products is critical for the health of Arkansans because they are being marketed particularly to youth and because the long-term health consequences of these products remain unclear.

Arkansas made substantial progress in the past decade in reducing smoking rates and improving tobacco-related health outcomes among its residents. However, the state still ranks near the bottom nationally in smoking rates, other health-related behaviors, health care access, and health outcomes. This does not represent a failure of the programs funded by the Initiated Act. In several cases, programs did not use all of their resources in the intended fashion. However, in most cases, the programs fulfilled their missions and met the start-up and short-term goals set by the act, as well as further goals set by the ATSC. These funded programs helped Arkansas make gains in its chosen areas. However, full use of MSA resources by the programs can be expected to lead to larger gains in the future. ■

Full use of tobacco settlement resources by the programs can be expected to lead to larger gains in the future.

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