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The Arkansas Tobacco Settlement Programs

The Impact of One State's Investment in the Health of Its Residents

In November 2000, Arkansas voters passed the Tobacco Settlement Proceeds Act, a referendum to invest the state's share of a multibillion-dollar tobacco settlement in health-related programs focused on reducing and preventing smoking, improving access to medical care, and bolstering health education and research. Researchers from RAND Health are conducting an ongoing evaluation of these programs and their impact on Arkansas residents' health and smoking behaviors. Results from the most recent analysis, presented in RAND's fourth biennial report, show that Arkansas' investment is paying dividends. The programs have been a force behind the state's downward trend in smoking rates, especially among vulnerable populations. Smoking rates among these populations—teens, young adults, and pregnant women of all ages—have all declined below what would be expected in the absence of the tobacco settlement programs. In 2009, smoking rates for all adults remained significantly below what they had been prior to initiation of the programs. Although some programs have not achieved the long-term goals specified in the act, many interim programmatic goals have been achieved, and all programs have made substantial progress.

Arkansas' Multipronged Approach: The Seven Programs

In November 1998, nearly every U.S. state signed the Tobacco Master Settlement Agreement, which ended years of legal battles between the states and the major tobacco companies. Under the terms

Key findings:

- Nearly a decade after Arkansas began investing its tobacco settlement money in smoking prevention and other health-related programs, the state has begun to see progress on some key health outcomes.
- Smoking rates among key populations—teens, young adults, and pregnant women of all ages—have declined below what would be expected in the absence of the tobacco settlement programs.
- Adult women were smoking significantly less than would be predicted by the baseline trend, although adult men were not.
- There have also been reduced hospitalization rates for a variety of diseases that are associated with smoking and secondhand smoke, including strokes and heart attacks.

of the agreement, the tobacco companies are now paying participating states more than \$206 billion over a period of 25 years. Arkansas receives less than 1 percent of these payments. But among the 46 participating states, Arkansas is unique in that the state invests all of its share of the funds in health-related programming.

Arkansas used the tobacco settlement funds to create seven programs (Table 1). Only one of these, the Tobacco Prevention and Cessation Program,

This Highlight summarizes RAND Health research reported in the following publication:

Schultz D, Tharp-Taylor S, Dubowitz T, Yu H, Lovejoy S, Phillips A, and Engberg JB. *Evaluation of the Arkansas Tobacco Settlement Program: Progress During 2008 and 2009*, Santa Monica, Calif.: RAND Corporation, TR-834-ATSC, 2010 (available at http://www.rand.org/pubs/technical_reports/TR834/).

Table 1
Programs Funded by Arkansas Tobacco Settlement Initiative

Program	Description	Activity Areas
Tobacco Prevention and Control Program (TPCP)	Using CDC recommendations for tobacco cessation and prevention activities, TPCP develops programs aimed at reducing the initiation of tobacco use and resulting negative health and economic impacts among Arkansas residents	Community prevention programs School education and prevention programs Enforcement of youth tobacco control laws Tobacco cessation programs Public awareness and health promotion campaigns Statewide tobacco control programs Tobacco-related disease prevention programs Minority initiatives Monitoring and evaluation
Delta Area Health Education Center (Delta AHEC)	Delta AHEC aims to increase access to health care for residents of the Delta, a medically underserved region	Training and recruitment of students and health care professionals Service provision throughout the Delta region
Arkansas Aging Initiative (AAI)	AAI works to (1) improve the health of older Arkansans through interdisciplinary geriatric care (clinical care) and innovative education programs and (2) influence health policy affecting older adults	Clinical services Education Promotion Policy Sustainability Research
Minority Health Initiative (MHI)	MHI identifies special health needs of Arkansas' minority communities and implements health care services to address these needs	Public awareness of minority health issues Health screening programs Intervention strategies Database development (biographical, screening, cost, and outcomes data)
Medicaid Expansion Programs (MEP)	MEP seeks to expand access to health care through targeted expanded benefits packages that supplement the standard Arkansas Medicaid benefits. The programs are managed by the Arkansas Department of Human Services	Pregnant Women's Expansion Program AR-Seniors Program Medicaid-Reimbursed Hospital Care Program ARHealthNetworks
Fay W. Boozman College of Public Health (COPH)	COPH offers professional education, research, and services to the public health community of Arkansas	Degree and continuing education programs in public health Health services research Policy and advisory resources
Arkansas Biosciences Institute (ABI)	ABI develops new tobacco-related medical and agricultural research initiatives intended to improve the health of Arkansans, improve access to new technologies, and stabilize the economic security of Arkansas	Research and collaboration among member institutions Public dissemination of research results

is completely dedicated to smoking prevention and cessation; this program, however, receives about 30 percent of the state's settlement funds. Following guidelines established by the U.S. Centers for Disease Control and Prevention (CDC), TPCP's activities include community prevention programs, school education programs, enforcement of youth tobacco control laws, public awareness campaigns, minority initiatives, and other efforts. Four of the programs target the short-term health-related needs of disadvantaged Arkansans: Delta Area Health Education Center, Arkansas Aging Initiative, Minority Health Initiative, and Medicaid Expansion Programs. Two programs expand public health education and the state infrastructure for public health research: College of Public Health and Arkansas Biosciences Institute.

The 2000 state referendum also created the Arkansas Tobacco Settlement Commission (ATSC), which is respon-

sible for monitoring and evaluating the performance of the seven public health programs. The commission contracted with RAND to evaluate the effects of the programs on smoking and other health-related outcomes and to assess the programs' progress in accomplishing their goals.

Trends in Smoking-Related Outcomes

RAND's analysis of smoking-related health outcomes for Arkansas focused on three key trends: adult smoking behavior; youth smoking behavior; and smoking-related health indicators, including low-weight births, heart conditions, stroke, pulmonary conditions, and diabetes.

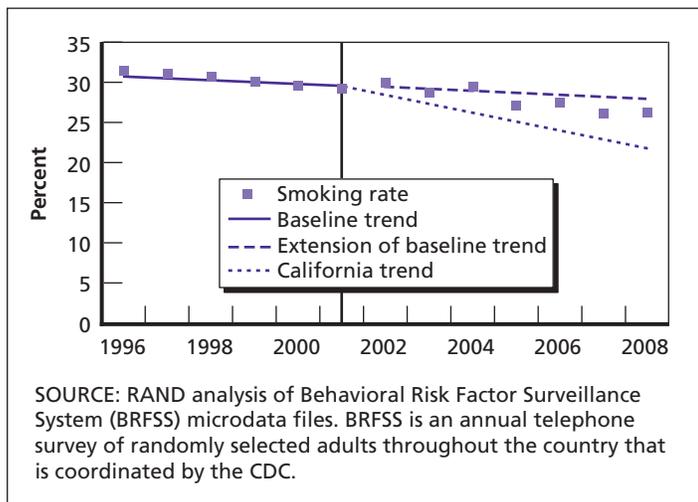
Adult Smoking Behavior

In Arkansas, the 2008 adult smoking rate of 22 percent was four percentage points lower than the five-year average pre-

ceding TPCP programming. This decline is equivalent to 16 percent fewer adult smokers over that time period. However, the smoking rate was only slightly below the rate that would be expected if the pre-2002 baseline trend had continued; furthermore, it did not match the expected decrease that would have followed implementation of a comprehensive smoking control program (comparable to the one launched in California). Nonetheless, this trend represents a major improvement for the health of Arkansans (Figure 1). Findings for specific groups of adults revealed the following:

- In 2008, adult women were smoking significantly less than would be predicted by the baseline trend, although men were not.
- While the smoking rate for young adults did not decrease in 2008, it remained below the baseline trend for this population.
- The smoking rate for pregnant women continued to decrease in 2008 and was significantly below the baseline trend (Figure 2).

Figure 1
Smoking Rate of Adults Age 18 and Over in Arkansas, Adjusted for Demographic Changes



Youth Smoking Behavior

As with adults, fewer young people in Arkansas in 2008 were smoking than baseline trends would predict. As seen in Table 2, findings for specific groups showed the following:

- Although the smoking rates among high school students did not decrease between 2007 and 2008, the current rate of 20 percent represented a statistically significant decrease from the smoking rate in 2000.
- For pregnant teenagers (age 14–19), the 2008 smoking rate of less than 16 percent represented a statistically significant decrease from the smoking rate in 2000.

Because the data on smoking rates for youth and pregnant teens come from two different surveys, they independently confirm the large decline in youth smoking.

Smoking-Related Health Outcomes

As part of the outcome analysis, researchers examined hospital discharges for conditions related to smoking, including strokes, heart attacks, asthma, pneumonia, diabetes, and

Figure 2
Smoking Rate of Pregnant Women in Arkansas, Adjusted for Demographic Changes

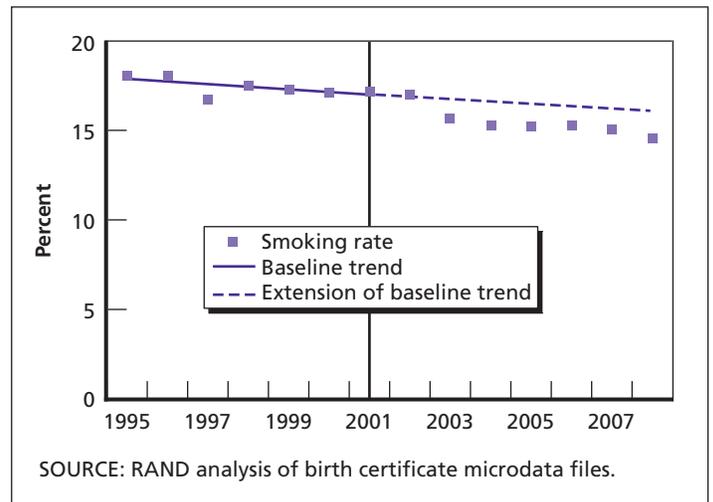


Table 2
Decreases in Smoking Prevalence Among Young People, 2000–2008

Population	2000 Rate	2005 Rate	2007 Rate	2008 Rate	Percentage of Decrease Between 2000 and 2008
High school students ^a	35.8	26.3	20.7	20.3	43.3
Pregnant teenagers (14–19) ^b	21.5	16.1	16.1	15.6	27.4

NOTE: The estimated decrease is significant at the 5 percent level for the populations examined.

^a2009 Arkansas Youth Risk Behavior Survey.

^bRAND analysis based on birth certificates, adjusted for change in population demographics.

low-weight births. It is possible that reductions in smoking by people with serious health conditions have led to healthier outcomes for this group. It is also possible that reductions in exposure to secondhand smoke have had health benefits.

- Data for 2007 and 2008 showed significant downward trends in hospitalizations for strokes and heart attacks, continuing a decline that began in 2004.
- Rates of asthma, diabetes, and pneumonia have not declined in Arkansas following the start of tobacco settlement programs, although rates of increase have fallen.
- After declining over most of the study period, hospital discharges for low-weight births increased in 2007 and 2008.

While some of these trends are promising, none should be considered definitive evidence of the impact of tobacco settlement programming. These conditions are influenced by other factors as well. The rates for Arkansas should be monitored in the future and compared with national rates to provide continuing evidence regarding the impact of smoking control activities.

Program Performance: Progress, Challenges, and Recommendations

RAND's evaluation also examined each program's activities and described its progress toward program goals during 2008–2009. In addition, the evaluation analyzed spending trends for each program and made recommendations for each program as it moves forward. Highlights of the program evaluations appear below.

Tobacco Prevention and Cessation Program. TPCP continues to pursue prevention and cessation efforts in accordance with the CDC program components.

- Through community and school grant programs, TPCP funded 56 community- or school-based organizations in fiscal year (FY) 2010 to conduct prevention, education, and outreach activities.
- A new smoking cessation hotline fielded more than 27,000 calls in 2009.
- Overall, TPCP spending increased by 11 percent in 2009, reflecting an increase in its appropriation. Cessation programs represent 24 percent of the total budget.

Aside from the tobacco-related health outcomes described above, other outcomes for TPCP include those related to smoking policies and enforcement.

- The proportion of people reporting that smoking is not allowed in workplace indoor common areas increased significantly compared with that in other states.
- The violation rate for laws forbidding sales to minors has stabilized, with 5 percent of compliance checks resulting in violations.

RAND's recommendations for TPCP focus on strength-

ening the implementation and utilization of the web-based reporting system for all its grantees and on communication and coordination among the different grantees.

The Delta Area Health Education Center. Through dozens of programs and services, Delta AHEC has strengthened its ability to recruit and train health students and professionals and provide education and health-related services to communities and clients throughout the Delta region.

- During 2008 and 2009, Delta AHEC reached approximately 1,800 students with its program to expose young people to health careers.
- Delta AHEC's continuing education programs for medical professionals served over 1,400 people during 2008–2009, while its medical library provided services to over 2,300 health professionals and students.
- Delta AHEC increased its encounters with community members to more than 100,000 through its health and education services.
- In 2009, Delta AHEC spent about 15 percent of its budget on recruiting and training health students and professionals and the remainder on services.
- With respect to smoking-related outcomes in the Delta region, smoking rates for adults and pregnant women did not differ from the baseline trend.

RAND's recommendations for the Delta related to improving the efficiency and effectiveness of the services offered to community members and professionals.

The Arkansas Aging Initiative. AAI's activities during the last two years have resulted in increased access to quality, evidence-based education and clinical services for older Arkansans.

- AAI's Senior Health Centers provided clinical services at more than 42,000 visits each year during 2008–2009.
- AAI completed nearly 130,000 education encounters with community members, health professionals, paraprofessionals, and students during 2008–2009.
- Through its promotion and policy work, AAI continued efforts to increase its visibility and inform aging policies at the local, state, and national levels.
- AAI made substantial progress in securing additional funds to supplement its tobacco settlement funding. For FY 2008 and FY 2009, AAI received more than \$4.5 million in additional funds.
- The avoidable hospitalization rate among elders in Arkansas counties with Centers on Aging reached a plateau, after declining since its peak in 2003.

RAND's recommendations for AAI focused on continuing and expanding current activities and developing a plan for securing sustainable funding.

Minority Health Initiative. At the end of 2009, MHI completed a strategic planning process that identified specific awareness, screening, and intervention strategies to address its priorities.

- Through its awareness activities, MHI educated, trained, or screened about 2,500 community members and distributed nearly 100,000 educational inserts during FY 2009.
- During 2008–2009, MHI increased its involvement in policy-related task forces and coalitions to broaden its impact and help MHI reach its goals.
- MHI expanded its capacity to assess the outcomes of its programs and plans in order to use this information for future program planning.

MHI's strategic planning process identified six new goals for FY 2010 and FY 2011, focused on screening, education, and coordination efforts. RAND's primary recommendation was to monitor and measure progress toward these new goals.

Medicaid Expansion Programs. MEP's four expansion programs provide access to health care for vulnerable populations in Arkansas.

- During 2008–2009, enrollment in the ARHealth Networks program (for adults age 19–64) rose from less than 500 per month to more than 1,500.
- The Pregnant Women's Expansion Program provided access to Medicaid services to an average of 1,939 pregnant women per six-month period during 2008–2009.
- Through its AR-Seniors program, MEP expanded Medicaid benefits to an average of 5,253 Medicare beneficiaries per six-month period in 2008–2009.
- The AR-Seniors program contributed to a decline in avoidable hospitalizations among the elderly, particularly in high-poverty counties.
- Spending on the ARHealthNetworks program increased substantially, reflecting expanded enrollment. Spending in FY 2009 on the Pregnant Women's Expansion Program and the AR-Seniors program was below FY 2005 levels.

RAND's recommendations for Medicaid programs emphasized understanding the size and needs of populations targeted by MEP and improving access to those programs.

College of Public Health. Over the past two years, COPH has continued to develop its education programs, research activities, and service efforts.

- Most graduates pursued employment in a field related to public health.
- Since 2005, COPH has expanded its revenue stream, so that tobacco settlement funding makes up a diminishing share of revenues.

- COPH faculty increased the number of publications in ranked journals, with a significant increase in the number of publications in the top ten journals.

RAND's recommendations for COPH focused on strengthening its degree programs and enrollment to help ensure the institution's future.

Arkansas Biosciences Institute. ABI focuses on research and collaboration among its member institutions.

- The number of projects in target areas decreased or stayed the same during 2008–2009. However, ABI accomplished its goal of increasing research funding: It reached a total of \$64.5 million in FY 2009.
- ABI increased the number of collaborative research projects led by member institutions to 64 in 2009.
- ABI reached its goal of increased dissemination of its findings. Since 2007, ABI increased the number of research publications, lectures, and seminars; in-person media contacts and press releases were similar to prior levels.
- The publication of ABI's research findings in scholarly journals decreased in both quantity and quality from the preceding year.

RAND's recommendations emphasized continued growth in ABI's research and collaborative efforts to address sustainability issues across the member institutions.

Conclusion

The seven programs supported by the tobacco settlement funds have continued to expand their reach in improving the health of Arkansans. The results of the outcome evaluation indicate that, collectively, the tobacco settlement programs are contributing to reduced smoking and improved health in Arkansas. There have been significant decreases in smoking rates for adult women, high school students, and pregnant teenagers. Overall, smoking rates for adults in Arkansas are significantly below what they were before initiation of tobacco settlement programming. There is also evidence of improvements in smoking-related health conditions, including strokes and heart attacks.

Despite progress, there is still room for improvement. Although Arkansas is a national leader in spending a considerable portion of its tobacco settlement money on smoking prevention, the state still spends only about half the amount recommended by the CDC for prevention efforts. Increasing the funding to CDC-recommended levels would help Arkansas extend its gains in smoking reduction. Investments in health may show returns only after many years. Maintaining a long-term commitment and support for programs will be necessary to ensure continued progress toward improving the health for the residents of Arkansas. ■

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