



1

TOP
TEN

Public Health Achievements in the First Decade of the 21st Century

**A Report Prepared by the
Arkansas Department of Health**

Introduction

Public health is the science and practice of protecting and improving the health of a community by preventive medicine, health education, control of communicable diseases, application of sanitary measures and monitoring of environmental hazards.*

We at the Arkansas Department of Health (ADH) consider that all Arkansans are our clients all of the time. We want those who are healthy to stay healthy and those with illness to have access to quality health care. From scientific research to health education, the field of public health changes the social conditions and systems that affect everyone within a given community.

Because of public health we understand that unclean water can carry bacteria that cause disease, second-hand smoke can be deadly and seatbelts can save lives. Public health monitors and identifies the social, cultural and economic factors that affect the overall health of entire communities. Public health practitioners advocate policies, promote behavioral change and change practices to ensure that we all stay healthy

Over the last 100 years, there have been immeasurable public health improvements in areas that protect and improve our quality of life. We are proud to share what we consider to be the top 10 public health achievements in Arkansas for the first decade of the 21st century.

The achievements cannot be attributed to any one agency, individual or organization. They

are the result of efforts by many people with a common vision for a healthier future.

In the broadest sense, this work has been public policy that was driven by science. However, the most convincing arguments for real change may not always be evidence-based – sometimes the appeal comes from emotion-driven initiatives. But in every case, the foundation for real change has to come from scientific data that tells us what needs to be done.

For many years, Arkansas has ranked at or very near the bottom of the list on almost any published national health measurement study. Our levels of education and poverty have historically been barriers to a quality of life and longevity that many other states enjoy. In addition, as a small, rural state with areas that are impoverished and suffer from low socio-economic status, there have been limited means to provide the kind of health care that an ever-increasing burden of chronic disease would dictate.

The net result of these 10 achievements is significant progress. Following are our choices for the top achievements in public health in Arkansas for the first decade of the 21st Century.

* *Public Health Institute, Public Health 101*



Table of Contents

1	Coalition for a Healthier Arkansas Today (CHART) Plan: The Tobacco Master Settlement Agreement.....	3
2	Reduction of Adult and Youth Tobacco Use	4
3	Passage of the Clean Air Act.	5
4	Hometown Health Improvement	6
5	2009 School Influenza Immunization Program.....	7
6	Expansion of the Newborn Screening Program	9
7	Act 1220 of 2003 to Combat Childhood Obesity.....	10
8	Arkansas Public Health Laboratory.....	11
9	Public Health Preparedness.	13
10	Statewide Trauma System: A System Saving Lives.....	14



1 Coalition for a Healthier Arkansas Today (CHART) Plan: The Tobacco Master Settlement Agreement

“...Four major principles for use of the money were agreed upon...”

Situation:

High rates of smoking and related diseases and conditions in Arkansas lead to rising and unaffordable health care costs. In 1998, 46 state attorneys general settled a lawsuit over states' smoking-related health care costs with five major tobacco corporations during the next 25 years. Arkansas received its first portion of the master settlement agreement (MSA) dollars, totaling \$62 million in November 1998, with approximately \$50-60 million expected per year thereafter.

Solution:

The areas on which the funds would be directed – health- or non-health-related options – depended on the legislature. The first attempts to direct the money toward health-related programs and biomedical research were not successful. To garner support, the Arkansas Center for Health Improvement (ACHI) Health Policy Board commissioned a white paper on the effects of tobacco in the state. It found that Arkansas had the third highest number of adults in the country who smoked cigarettes, more than 45 percent of high school students used tobacco and lung cancer deaths led all other deaths caused by cancer. The report was presented to Governor Mike Huckabee and legislative leaders, and as a result, four major principles for use of the money were agreed upon: all funds should be used to improve and optimize the health of Arkansans; funds should be spent on long-term investments 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.

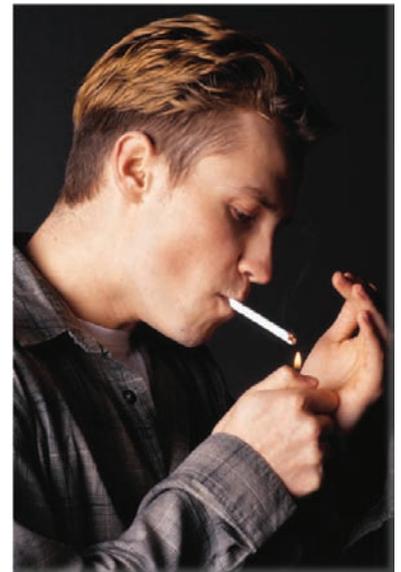
At the same time a legislative committee was grappling with nearly 300 proposals for using the funding, a working group – the Coalition for a Healthier Arkansas Today (CHART) – was formed to assess the state's needs and formulate a plan with long-term and short-term strategies for using MSA funds to most directly improve the health of Arkansans. One of the CHART leaders was Dr. Joe Thompson, who is currently the state's surgeon general.

Following a statewide effort to get support for the proposal, it failed in a special session of the legislature in 2002. In the fall 2002 general election, under the leadership of the governor and state Senator Jay Bradford, Arkansas voters approved by a 65 percent margin Initiated Act 1, which established a framework for funding research, education and health care programs using dollars from the settlement.

Results:

Arkansas continues to direct all MSA dollars toward seven health-related programs, and the interest generated each year supports the Arkansas Tobacco Settlement Commission (ATSC), which has oversight of the Act's programs. The commission was established by legislation. The RAND Corporation, an external consultant/evaluator, works with ATSC to monitor programs and make recommendations on funding allocations to the governor and the legislature. The legislature must approve appropriations every year for the expenditure of settlement funds.

The ADH Tobacco Prevention and Cessation Program includes 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. Four additional programs established by Act 1 target the short-term health-related needs of disadvantaged Arkansans: Delta Area Health Education Center (AHEC) at Helena-West Helena, the Arkansas Aging Initiative, the Minority Health Initiative and Medicaid Expansion Programs. Two other programs established by Act 1 expand public health education and the state infrastructure of public health research: the University of Arkansas for Medical Sciences (UAMS) Fay W. Boozman College of Public Health (COPH) and Arkansas Biosciences Institute. (The COPH was named after the late Dr. Boozman to recognize his efforts with CHART.)

A great deal has been accomplished over this past decade by local health agencies, schools, community organizations and corporations working together with state and federal government. Since 2002, smoking rates for youth and adults have declined, more persons of all ages have received needed health care, and the COPH is fully accredited and has both a strong student body and a highly productive faculty. Research activities at the COPH and the newly-created UAMS Biomedical Research Center have been expanded. In Helena-West Helena, the AHEC is well established, as are the Clinical Centers on Aging around the state. These accomplishments are only part of the impressive developments that have been made possible from the MSA funds.



2 Reduction of Adult and Youth Tobacco Use

“The youth smoking rate in 2010 was 23.5, and adults were smoking less, too.”

Situation:

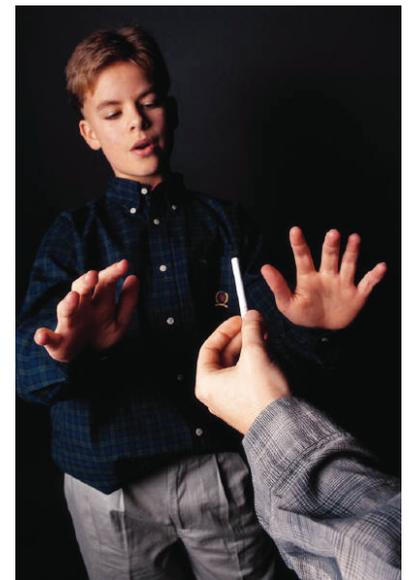
In 2000, Arkansas had the third highest proportion of adults in the nation who smoked cigarettes, more than 64 percent of the state's youth were using tobacco, and lung cancer exceeded all other causes of cancer deaths combined. Coronary heart disease, stroke and emphysema, along with tobacco-related cancer, were the leading causes of death. As a result, the burden of health care costs was growing every year.

Solution:

In 2000, a new framework was established to use the tobacco master settlement agreement dollars to fund projects that included health programs to curb youth smoking and prevent diseases associated with tobacco use. Using the Centers for Disease Control and Prevention (CDC) Best Practices for Tobacco Control as a guide, over the last decade, the ADH TPCP has helped to reduce disease, disability and death related to tobacco by preventing the initial use of tobacco by young people, promoting quitting, eliminating exposure to secondhand smoke and educating the population about the effects of tobacco use.

Results:

The youth smoking rate in 2010 was 23.5 percent, and adults were smoking less, too. The per capita consumption of packs of cigarettes has decreased, and today 105,000 fewer adult Arkansans smoke as compared to the number in 2002. Since 2000, about 17,000 fewer Arkansas high school students smoke. During the past decade, Arkansans have saved more than \$1 billion dollars in lifetime health care savings.



3 Passage of the Clean Indoor Air Act

“Today clean indoor air is the rule in hospitals, public buildings, most businesses, restaurants and even some bars.”

Situation:

At the beginning of this century, smoking was a fact of life in almost all public building, including hospitals, despite the fact that heart disease, stroke and cancer had all been linked to secondhand smoke. Some restaurant operators were opposed to local policy change that would make them compete with restaurants in other Arkansas towns where smoking was allowed. Some employers in small businesses considered it a right to smoke and allow smoking. Arguments about individual rights had been used for years to support exposure to secondhand smoke. Advocates for change in public policies on smoking knew that the clean air legislation in other states had resulted in higher quit rates among smokers. It was also shown to have, a neutral effect on business revenues. In fact, in many areas of the country, the change resulted in increased sales in restaurants and bars, as well as better health for all concerned.

Solution:

Advocates for change, including local coalitions, organized around the proposal to write new state laws that would ban smoking in all workplaces, including restaurants, with some exemptions that allowed smoking only by adults. The American Lung Association, the American Cancer Society and the American Heart Association, together with other non-profit organizations, supported this work. The Clean Indoor Air Act took effect on July 21, 2006, and made Arkansas one of 18 states in the nation to prohibit smoking in indoor workplaces and public areas and helped eliminate the public’s exposure to secondhand smoke. The ADH has worked to educate the public on the merits of the new policy and has



undertaken enforcement of the law. The changes in public policy have helped increase the number of people who quit smoking. The health benefits associated with clean air laws are attributed to reduced exposure to the toxins contained in tobacco smoke. The overwhelming weight of research available supports the belief that health care costs and worker productivity will both be affected positively in the future.

Results:

Today clean air is the rule in hospitals, public buildings, most businesses, restaurants and even some bars. No evidence supports earlier predictions that business would suffer, and compliance has been very good, with only a handful of violations in the last four years. In 2006 Arkansas became the first state to implement

a law prohibiting smoking in a car with a young child. In 2010 all state-funded colleges and universities in Arkansas implemented a law requiring all campuses to be smoke-free. In addition, some Arkansas cities have implemented ordinances that require public parks to be smoke-free. The health benefits associated with clean air laws, particularly if it becomes a comprehensive law, will serve to reduce the smoking rates of youth and adults, and will improve the health of nonsmokers, children and adults alike, as Arkansas moves up the scale of improved health for all.

4 Hometown Health Improvement

“The HHI model . . . is rooted in the idea that the way...to have better health is...to promote health, rather than treat illness.”

Situation:

Arkansas has historically had some of the worst health status measurements in the country. To effectively address community health problems, the solutions must come directly from the hometowns.

Solution:

These activities are happening daily in every county in the state through 73 Hometown Health Improvement (HHI) coalitions. The HHI model, first piloted in 1998 in Boone County, is rooted in the idea that the way for everyone to have better health is to improve, maintain and promote health, rather than treat illness. HHI harnesses community energy, promotes local control, provides data for evidence-based decision making, works with state and local partnerships, and follows through to produce impressive homegrown results.



To successfully address community health problems, county health units provide leadership and an organized system for the community to identify health challenges and to develop solutions. Community stakeholders (community members, public and private organizations, and businesses) are full and active participants in the development of their community public health assessment and in prioritizing their health issues and needs. HHI state and regional level support includes data analysis, planning, resources, training, technical assistance, communication and evaluation. One key to success is the elimination of duplication of effort.

Results:

Over the past decade, people in communities across Arkansas have reaped many benefits, such as reduced preventable illnesses and injuries, better coordination of community health services, and improved health and quality of life for their citizens.

HHI: One County's Story

Situation:

What happens when you mix adolescents, peer pressure, a multi-billion dollar pro-tobacco media campaign and public smoking? Young adults can be caught in the tenacious grip of tobacco. Eighty-five percent of adult smokers began smoking before they are 18. In 1998, 26 percent of adult Arkansans were smokers, and Arkansas was one of the unhealthiest states in the nation.

Solution:

The ADH tried a new approach to an old problem. The ADH helped bring together a broad range of citizens from rural Boone County to pilot a program called the Hometown Health Improvement (HHI)

initiative. The idea was to harness community focus, local control, data-based decision making and local-state partnerships to identify health challenges and develop solutions. Boone County residents jumped on the opportunity, formed committees and began assessing the county's health needs.

The Boone County Hometown Health Coalition worked with the ADH to conduct the CDC's Adult Risk Behavior Survey in 2002. When the Coalition learned that 29 percent of the adults in the county smoked, they asked themselves a tough question: "Can we do something about it, and do we have the guts to try?" Their answer was a resounding "Yes!"

To address the high smoking rate, community leaders knew they had to combine their resources and work together. ADH provided a Community Tobacco Education Grant to enable the Boone County Hometown Health Coalition to expand and form the Tobacco-Free Boone County Coalition, with members from all sectors of the community.

The newly formed Tobacco-Free Boone County Coalition began to tackle tobacco use by:

- Setting up town hall meetings to get residents involved – 678 members and counting
- Promoting state and local tobacco cessation programs
- Assisting businesses in making tobacco policy changes – 16 successes so far
- Working with community leaders to protect citizens from secondhand smoke – restaurants, parks and festivals are all now smoke-free
- Launching a media campaign in collaboration with ADH's "Stamp Out Smoking" program
- Providing education about the dangers of tobacco – 20,000 trained to date
- Participating in community events and activities – more than 250 since the program began

Results:

Over the past eight years, the Tobacco-Free Boone County Coalition has been able to leverage just over \$670,000 from ADH Community Tobacco Education Grant funding to significantly reduce the burden of tobacco in its community. Since the Coalition was formed, the adult smoking rate in Boone County has dropped seven percent and smokeless tobacco use has decreased three percent. In addition, the Boone County HHI Coalition has developed a prescription assistance program, a community health resource center and many other programs – ultimately changing the culture of Boone County into a community that cares about wellness and health.

What will the Coalition tackle next? When it learned that 66 percent of the adults and 34 percent of the children there are overweight, it set out to do something about that and it was recently awarded a \$360,000 grant from the Robert Wood Johnson Foundation to address childhood obesity.

5 2009 Influenza Immunizations in Public Schools

“As the 2009 influenza A (H1N1) virus spread... Arkansas undertook one of the most ambitious vaccination efforts in the state's history.”

Situation:

As kids returned to school in August 2009, administrators were seeing something very uncommon for that time of year – the flu. Rather than seasonal flu, the illness was the new H1N1 influenza A virus, commonly known as “swine flu.”

It is well established that the more people we vaccinate, the harder it is for the influenza (flu) virus to spread through our state. Additionally, it has been shown that vaccinating children is the best way to protect other age groups, especially the elderly, from the flu. When children get the flu, they miss school, their parents miss work, and families and the economy suffer. Children ages five through 18 were identified by the CDC as a target population to receive the H1N1 vaccine. The ADH has conducted mass flu clinics since 2002, but prior to 2009, the ADH did not have sufficient resources to administer flu vaccine to all children in grades K-12.

Solution:

Plans were announced in early August 2009 that local school districts statewide would offer the seasonal flu vaccine to all school children in grades K-12 in school-located clinics. As part of Governor Mike Beebe’s health initiative funded by the tobacco tax passed during the 2009 legislative session and with federal monies, the ADH, Arkansas Department of Education (ADE) and many community partners worked together to develop seasonal vaccination clinics for the schools. Schools sent home fact sheets and parental consent forms. School districts picked dates for the clinics, and ADH ordered needed vaccine. Planning hit a bump because of the initial shortage of H1N1 vaccine. As a result, a constantly evolving message had to be communicated about which priority groups – children and pregnant women – would receive the limited supplies of vaccine first. Also, the composition of these priority groups changed as the impact of the virus on various age groups became known and sufficient quantities of vaccine became available.

As the number and severity of cases of H1N1 flu escalated and deaths began to be reported, plans for the clinics were adjusted to allow kids to receive seasonal and H1N1 vaccine. The school-located clinics required extensive coordination among the ADH, school administrators and many school nurses that supported the clinics.



Results:

As the 2009 influenza A (H1N1) virus spread across the United States, Arkansas undertook one of the most ambitious vaccination efforts in the state’s history. Eventually everyone who wanted seasonal or H1N1 flu shots was vaccinated. Arkansas was the only state to vaccinate children in all public school districts and charter schools for seasonal flu and H1N1 flu. A total of 447,853 seasonal doses and 343,292 H1N1 doses for a total of 791,145 flu doses were reported to the ADH immunization registry by both public

and private providers. Of those, 345,008 (153,927 H1N1 and 191,161 seasonal) were given to students at 1,093 school/ daycare clinics, including 77 private schools. Thousands of medical professionals and community volunteers assisted. Arkansas ranked fifth nationally for vaccinating all persons ages greater than six months. Plans call for continuing the annual school-based flu clinics and mass flu clinics using the model and lessons learned from 2009.



6 Expansion of the Newborn Screening Program

“ For those families whose children have been helped, the program is literally a life saver. ”

Situation:

Nothing is more important to parents than knowing that their new baby is healthy. A number of newborn babies are born each year with rare conditions that can be harmful or even fatal if not treated promptly. The number of medical conditions detectable within the first month of life for newborns has risen dramatically due to laboratory advances. Newborn screening began 40 years ago for phenylketonuria (PKU), a chemical disorder. From the 1960s onward, screening programs for PKU became the standard of medical care in the United States. Subsequently, screening for additional conditions became accepted, if a test was available and affordable, the condition evaded clinical recognition early in its course, and harmful health consequences could be prevented or reduced by medical intervention. For many of these conditions, the disorder needs to be detected very soon after birth for treatment to be most effective. Beginning in the late 1960s, Arkansas started screening for seven disorders.



Solution:

More recent guidelines from the CDC and the Health Resources and Services Administration, together with organizations such as the March of Dimes, recommend that all states screen for 29 core conditions. In 2005 and 2007 Arkansas passed legislation to expand its newborn screening program. On July 1, 2008, as a result of collaborative efforts among the ADH, UAMS, Arkansas Children’s Hospital, Arkansas March of Dimes, the Arkansas Hospital Association and others, Arkansas expanded its screening of newborn babies from seven to 29 conditions detectable by efficient and reliable screening tests.



Results:

Results of screening in Arkansas matched expectations based on national figures and from other large state screening programs. For example, it was expected that 10 new cases of cystic fibrosis would be found in Arkansas each year, and 10 were detected the first year. Each year, our state public health laboratory performs more than 300,000 screenings on approximately 40,000 newborns. In all, 137 rare diseases were detected in the first two years of expanded screening. Seven tests are performed per sample, with a number of disorders lumped into one test. The tests are galactosemia (GALT), biotinidase, hemoglobinopathies (three disorders), cystic fibrosis, congenital adrenal hyperplasia, congenital hypothyroidism and the tandem mass spectrometry (MS/MS) disorders. The MS/MS disorders (five fatty acid disorders, nine organic acid disorders and six amino acid disorders) are all in one test. This totals 28 disorders, with disorder 29 being the hearing screen done at the birth facility. When a child is found to have an abnormality, parents are notified immediately.

A few additional years of screening may be required before it is possible to fully evaluate the impact of the expansion. For those families whose children have been helped, the program is literally a life saver. In addition, for parents who have learned that their child is without illness, the program has greatly relieved the fear that all parents face when a newborn joins the household.

7 Act 1220 of 2003 to Combat Childhood Obesity

“Today nearly 38 percent of Arkansas children are still overweight or at risk for overweight.”

Situation:

When the Arkansas General Assembly wrapped up its regular session in 2001 – including implementation of the Coalition for a Healthier Arkansas Today (CHART) plan using tobacco settlement money – one of the major health issues to which the legislature, the ADH and others in the state turned their attention was the growing epidemic of childhood obesity.



During the previous 50 years, Americans’ habits and routines regarding the kinds and increased amounts of food they consumed, combined with the effects of less time spent engaged in physical activities, produced alarming statistics related to childhood obesity. Changes in eating habits, lunchroom menus and the availability of candy and snacks in school vending machines added to the problem. Top that with Americans’ growing reliance on fast-food meals and diets with fewer fresh vegetables and fruits. The result has been a sure recipe for a health threat facing families and communities in Arkansas and in the nation overall.

Nationally, more than 30 percent of high school students were estimated by the CDC to be overweight or at risk for overweight in 2002. During the 2003-2004 school year, almost all public school students were weighed and measured to assess each student’s body mass index (BMI). The result: more than 38 percent of school-aged children in Arkansas were overweight or at risk for overweight. Obesity among children presents both immediate and long-term health risks and is associated with increased medical costs in both childhood and adulthood.

Solution:

Recognizing the pressing epidemic of obesity in general and that problems associated with obesity commonly begin in childhood, the State of Arkansas passed Act 1220 of 2003. Those who led the way for the new law included Speaker of the House Herschel Cleveland, a group of legislators on the Public Health Committee, leadership and representatives from the ADE, the UAMS COPH and the ADH. The law required that school districts establish wellness committees to provide local input and support for obesity prevention efforts in schools, limit vending and a la carte items in schools – requiring public reporting by school districts of the expenditures and revenue from district vending contracts and prohibiting student access to food and beverage vending machines in all Arkansas elementary schools – and established a statewide Child Health Advisory Committee that made recommendations that were adopted as regulations in 2007. These regulations established standards and policy recommendations for healthier foods and physical activity in all public schools. One section of the act requires each school district to measure the BMI for every public school student and send it to parents in a confidential report to increase awareness of health problems associated with childhood obesity. This new law included the most ambitious school reforms in the nation at that time and is supported from funding (not to exceed five percent) from the ADH Tobacco Prevention and Cessation Program.



Results:

We have made progress, but a lot of work is still needed. Today nearly 38 percent of Arkansas children are still overweight or at risk for overweight. However, since the implementation of Act 1220 of 2003, we are continuing to hold the line on the progression of this epidemic, according to data collected and reported by the Arkansas Center for Health Improvement in its Year 5 online assessment. The BMI data proved to be an essential component to raise the awareness and create dialogue among children, parents, educators and clinicians regarding healthy lifestyles and physical activity. Also significant are policies and procedures schools have put in place regarding vending machines and school menu items. For example, the most recent Act 1220 evaluation, published by a COPH investigative team, shows that there has been a significant increase in policies prohibiting the sale of “junk foods” in school cafeterias and vending machines. Nearly two thirds of schools have policies regarding ala carte items, vending machine contents and offering low-fat alternatives to whole milk, according to the COPH report. This evaluation also reported that parents and adolescents are comfortable with the BMI process and noted trends by parents limiting junk food and encouraging an increase in physical activity.

8 Arkansas Public Health Laboratory

“America’s health is increasingly at risk...The modern laboratory facility has enabled the expansion and use of the latest technology.”

Situation:

America’s health is increasingly at risk from emerging infectious diseases, foodborne illnesses, environmental exposures and the potential for chemical and biological terrorism. These risks are the result of a variety of factors, including increased global travel, widespread access to imported and domestic foods and the role of environmental factors in chronic disease, as well as the rise of domestic and international terrorism – especially troubling following the September 11, 2001, attacks.

Solution:

To respond effectively to these risks, every state needs a state-of-the art, fully certified public health laboratory. In order to replace the aging and increasingly problematic Arkansas public health lab built in 1969, legislation was passed to create a modern, high-tech laboratory located next door to the ADH central office. This was a result of the vision of Governor Mike Huckabee, the state legislature and its leadership, including Speaker of the House Herschel Cleveland – aided by many dedicated Department of Health employees. Construction of the new lab began in September 2004, and the building was dedicated in October 2006. Construction was funded through a bond issue financed by increasing the fees that the ADH charges for birth certificates and death certificates. The laboratory cost \$24.6 million and provides approximately 80,000 square feet with a 5,000-square-foot level 3 biosafety lab for handling dangerous, highly infectious disease agents.

Results:

Each year the lab performs more than 800,000 tests on about 500,000 specimens. In addition, the lab tests public drinking water from more than 1,000 sources



and food and drink from more than 14,500 food establishments to ensure that what Arkansans are drinking and eating meets all standards for health protection. There are 138 laboratory employees, who work in organic chemistry, inorganic chemistry, radiochemistry, food bacteriology, milk bacteriology, water microbiology, immunology, molecular, virology, clinical microbiology, tuberculosis, fungi, parasites, newborn screening, chemical terrorism, alcohol testing and rabies.

The modern laboratory facility has enabled the expansion and use of the latest technology. The laboratory has fully automated gonorrhea and chlamydia testing. Newborn screening for approximately 40,000 newborns each year has been expanded from seven disorders to 29. HIV testing has been automated. The newer facility also allows for additional tests to be developed, such as those to detect West Nile virus infection, whooping cough, many viral agents, and genetic testing of microbes for DNA fingerprinting of certain strains. The new lab allowed the ADH to rapidly expand testing for H1N1 flu to 24/7 during the recent pandemic.

The lab has also increased its chemical and biological testing capability and is currently developing new methods for the detection of the marijuana-like substance called K2, as well as for petroleum products in food. A fully automated tracking system for all specimens that are sent from the 94 local health units and all the HIV/syphilis specimens sent from each prison facility has been instituted. Finally, the new laboratory has a carefully constructed electrical and air handling system that ensures employee safety and security as it also provides an ideal environment to ensure accuracy for specimen testing.



9 Public Health Preparedness

“The nation’s ability to prepare for and respond to an infectious disease, bioterrorist attack or other emergency rests largely in states’ public health systems.*”

Situation:

Emergencies can cause widespread illness and death, disrupt economic and government activities, create fear, cost billions of dollars in lost economic revenue, and even escalate to an international crisis. Many factors make current threats more significant than in the past. Previously unknown illnesses have emerged, known diseases thought to be nearly wiped out have reappeared . . . and the threat of terrorism continues. The nation’s ability to prepare for and respond to an infectious disease, bioterrorist attack or other emergency rests largely in states’ public health systems.* However, response to natural disasters, such as hurricanes Katrina, Gustav and Ike, illustrate the need for partnerships between public health and other emergency response agencies.



Solution:

To assist states with these challenges, Congress authorized grants to states for bioterrorism and public health preparedness activities in 1999 and additional funding after the incidents of September 11, 2001, under the Public Health Security and Bioterrorism Preparedness and Response Act of 2002. The latter was for emergency planning and assessment, infrastructure development (particularly laboratory readiness), surveillance and reporting improvements, education and training, and communication. The ADH used this funding to establish a Division of Bioterrorism (later changed to Public Health Preparedness and Emergency Response Branch) and to fund the efforts of our partners, such as hospitals and community health centers

at the state and local level. The ADH is the lead agency in Arkansas for the State Emergency Support Function #8, which coordinates the health and medical response to emergencies in the state. The Preparedness and Emergency Response Branch works with partners to respond to a medical surge (an overload of patients at a hospital, for example), to establish liaisons with the state public health lab, to communication with the public, to coordinate with public health at the local level, to establish liaisons with the epidemiologic branch at the ADH, and to help access resources from federal partners.

Results:

With the addition of resources, training and planning, ADH is well prepared today to respond to and manage recovery for a variety of emergency conditions. During the last decade, the Strategic National Stockpile (SNS) was established, which can supply a cache of medical supplies and pharmaceuticals to affected states within a 12-hour timeframe. SNS resources were used during the 2009 H1N1 flu pandemic when Arkansas implemented a plan for mass dispensing of medications throughout the state. In addition, preparedness funding allowed Arkansas to purchase equipment such as communication devices and protective gear for handling hazardous materials, as well as integrated internet connections to respond to emergencies. Hurricane Katrina highlighted the need for a coordinated disaster preparedness plan and response effort. This insight led to a broader focus and resulted in the implementation of the Health Alert Network, an electronic database and health alert messaging system that can instantly send alerts to the medical community and other partners. A new, fully functional Emergency Operations Center at the ADH central office opened April 4, 2007. It can be made operational in minutes and provides a central location to determine the current situational status, coordinate operational actions and make critical decisions during emergency and disaster situations. The ADH preparedness plan is now integrated with those of various state and federal partners and has guided the response to disasters, such as hurricanes, pandemic influenza, West Nile virus, the 2009 ice storm, H1N1 flu, tornadoes and the Albert Pike Campground flood. In 2010 Arkansas was one of only three states to receive a perfect score in the annual Trust for America’s Health review of state public health emergency preparedness to handle disasters, epidemics and terrorism.



*Issue Brief, July 5, 2005, The Commonwealth Fund/John F. Kennedy School of Government

10 Statewide Trauma System: A System Saving Lives

“It is estimated that the trauma system alone will save about 168 lives and register gross savings of \$193 million each year.”

Situation:

In Arkansas, the leading cause of death for people from one to 44 years of age is traumatic injury. Most often, trauma is the consequence of a motor vehicle crash, a fall, drowning, a gunshot wound, fires and burns, a stabbing or assault with a blunt instrument. Just as significantly, the outcomes for people who survive very often result in a poor quality of life and medical costs that are impossible to meet for most people, even those with good insurance. Arkansas is a very rural state, with many miles of remote, two-lane highways and auto-accident rates nearly double that of the nation as a whole. Costs to Arkansans are high in terms of years of potential life lost and treatment costs. Arkansans die from traumatic injuries at a rate that is twice the national average. Many Arkansans believed that there was a well-thought-out system ready and waiting to care for them if they were seriously injured. In fact, there was no statewide trauma system to coordinate care among emergency responders and hospitals. Further, Arkansas had no primary seatbelt law and fewer requirements for the intermediate-level driver, as compared to other states.

Solution:

Trauma system development has been sporadic since the enactment of enabling legislation under Governor Jim Guy Tucker in 1993, a law that established the Trauma Advisory Council. The ADH Section of Emergency Medical Services (EMS) and Trauma Systems, under the guidance of the late David Taylor, was specifically charged with the development of a statewide trauma system plan, including the establishment of regional advisory councils. The initial Arkansas State Trauma Care System Plan included reducing numbers of preventable deaths, improving outcomes from traumatic injury and reducing medical costs through appropriate use of resources.

Recommendations from this plan were incorporated into the rules and regulations adopted in 2000 and amended in 2002. However, funding cuts led to limited development. A major step forward was taken by Governor Beebe in 2008, when he provided \$200,000 from his emergency discretionary funds to establish a new emergency response communications tool. As a result, the state now has a statewide computer-based network, called a “dashboard,” that provide real-time status for emergency rooms across the state, showing the availability of specialized physicians and nurses trained in advanced life support and trauma care. This information makes it possible for EMS personnel to find out where to take a patient for the best results, based on the conditions on the ground. Another key development was the new tax in 2009 levied on the sale of tobacco products that provides the funds to accomplish a number of important health care goals, including the development of a trauma system that will include trauma centers designated at four levels of resources and care standards.



Results:

In September 2010, three designated trauma centers were announced as part of the new system, which are the first of 73 facilities that have indicated that they will be a part of the new system. The three centers are the UAMS in Little Rock and the Regional Medical Center at Memphis (The MED), which are both designated as Level I centers, and Jefferson Regional Medical Center in Pine Bluff, which will be a Level II center. By the end of 2010, Arkansas Children's Hospital at Little Rock also received a Level I designation.



Arkansas has successfully put several key pieces of a comprehensive injury prevention and control system in place.

A 24-hour call center, which will open in early 2011 in Little Rock, will be staffed for service seven days a week and on holidays. Grants for communications and other needed equipment or staffing have been provided to emergency responders and EMS operators across the state. The response network has been upgraded to meet the needs for specialized equipment that will allow first responders to communicate with the call center. Regional committees around the state that will address special concerns have been organized. A Trauma Registry has been designed and is ready to record individual cases of traumatic injury.

Part of the injury prevention initiative includes a new primary seatbelt law and a graduated driver's license law, that were passed during the 2009 session to help reduce the number of serious motor vehicle injuries and fatalities. Primary seatbelt laws allow law enforcement officers to stop and ticket a driver for not wearing a seatbelt. A graduated driver's license has stricter requirements for teenaged drivers, who obtain learner's permits and intermediate licenses.

It is estimated that the trauma system alone will save about 168 lives and register gross savings of \$193 million each year. When combined with our primary seatbelt law and graduated driver's license law, 206 lives and \$237 million annually will be saved. It will be several years before the system will be fully operational, but Arkansas has made progress in developing a comprehensive system that is integrated with the local public health system – another major step to improve and protect the health of Arkansans



NOTES



Arkansas Department of Health
4815 W. Markham St.
Little Rock, AR 72205
www.healthy.arkansas.gov
Report prepared in 2010-11