

Is It Working?



Evaluating Injury Prevention Policies For Effective Public Health Practice

TABLE OF CONTENTS

Introduction	1
Nebraska—Saving Youth from Traumatic Brain Injury	3
Ohio—Regulating Prescription Drugs	7
Rhode Island—Making a Primary Belt Law Permanent.....	11
Conclusion	15

ACKNOWLEDGEMENTS

THE AMERICAN PUBLIC HEALTH ASSOCIATION would like to thank the Nebraska Department of Health and Human Services, Ohio Department of Health and Rhode Island Department of Health Violence and Injury Prevention Program for their contributions to this document.

This publication was supported by the Cooperative Agreement Number 5U38HM000459 from the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.

Is It Working?

Evaluating Injury Prevention Policies For Effective Public Health Practice

WHEN RESOURCES ARE SCARCE, as they often are in public health, it is easy to think of policy evaluation as an unaffordable luxury. To the extent it is considered, evaluation is often an afterthought—something appended to an otherwise thoughtful policy process. In fact, evaluation is neither a luxury nor an endnote: it is an integral feature of the policymaking process.

Public health experts deem policy evaluation so important that it occupies a central position on the Centers for Disease Control and Prevention policy framework (See Figure 1).¹ In this paradigm, both *evaluation* and *stakeholder engagement* are overarching aspects of the policy-making process that must be considered—and, in turn, inform—every other step from *problem identification* to *policy implementation*.

The value of a good evaluation cannot be overestimated. Not only can it prevent resources from being wasted on suboptimal—or even useless or harmful—interventions, but it facilitates continuous quality improvement, provides a mechanism to maintain stakeholder engagement and delivers up data to justify policy maintenance or modification. Evaluation is also a core element of evidence-based public health practice—a rigorous approach to population health protection that increasingly drives federal funding decisions. Both the American Recovery and Reinvestment Act of 2009 and the Patient Protection and Affordable Care Act of 2010 include an expectation that funded prevention strategies will be evidence-based.^{2,3}

Far from being optional, evaluation has become the new norm.

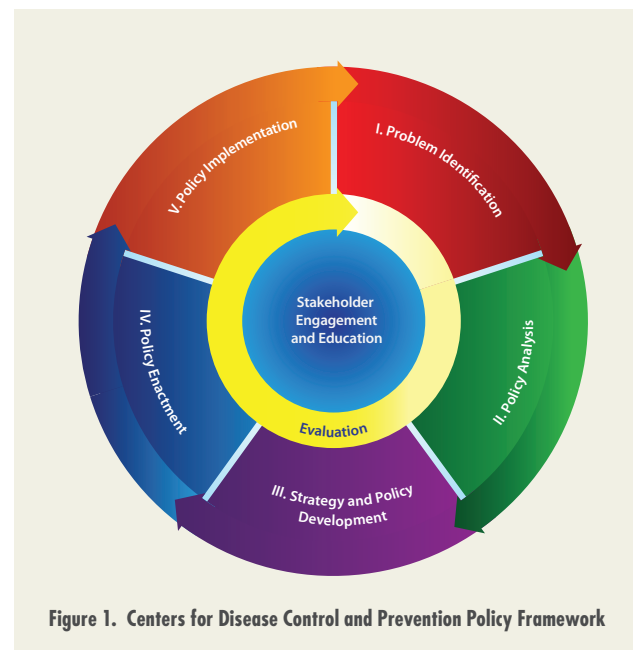


Figure 1. Centers for Disease Control and Prevention Policy Framework

The American Public Health Association, with funding from the Centers for Disease Control and Prevention, hosted a *Practical Policy Evaluation Training for Public Health Practitioners* in San Francisco, CA in November 2012. The goal of this training was to improve state health officials and other public health partners' understanding of policy evaluation and enhance overall public health policy capacity. The following case studies show how three states approached the evaluation of recently enacted injury prevention laws, including an Ohio law to reduce prescription painkiller abuse, a Nebraska traumatic brain injury prevention law and a Rhode Island primary safety belt law.

While policy evaluation is seldom challenge-free, these stories show the value of being able to answer the all-important question, “*Is it working?*”

References

- 1 CDC Office of the Associate Director for Policy (OADP). (2012). Policy Process. PDF available upon request; contact AD-policy@cdc.gov.
- 2 American Recovery and Reinvestment Act of 2009, Pub L No. 111-5, 123 Stat 233 (2009).
- 3 Patient Protection and Affordable Care Act of 2010, Pub L N. 111-148, 124 Stat 199 (2010).

NEBRASKA

Saving Youth from Traumatic Brain Injury



OVERVIEW

WITH INCREASING AWARENESS OF THE PREVALENCE AND CONSEQUENCES of traumatic brain injury, the issue has garnered attention at both the national and local levels. Reducing traumatic brain injuries is a Healthy People 2020 objective and the focus of the Centers for Disease Control and Prevention “Heads Up” program. In summer 2013, the National Football League settled a high-profile lawsuit with former players alleging the league misrepresented the health risks of repeated head injuries. In Nebraska, emergency department and hospital data show that many youth head injuries are attributable to high school sports activities. A dozen known cases of second-impact syndrome have occurred in Nebraska. One case involved a high school athlete who nearly died after suffering a concussion during a football game in 2004. Unbeknownst to anyone, the student-athlete had suffered an undiagnosed concussion days earlier as well.

The Brain Injury Association of Nebraska was a key promoter of the Nebraska Concussion Awareness Act. Peg Ogea-Ginsburg, who coordinates the Nebraska Department of Health and Human Services Injury Prevention Program, said, “The Brain Injury Association of Nebraska director at the time (the act was debated) told me that she had requests from coaches, parents, schools. They would get the calls from parents saying the ‘school is pressuring my son to play even though he’s had a concussion’. Or they would get calls from schools saying ‘the kids don’t want to be pulled from play’. They saw both sides of the issue. They were looking for something to give everyone guidance.”

The Concussion Awareness Act was noncontroversial and passed with overwhelming legislative support. It was signed into law in April 2011 and took effect July 2012.



POLICY

The Nebraska Concussion Awareness Act has two key provisions: (1) education for coaches and parents, and (2) removal from play following a suspected brain injury.

1. Each public, private, denominational or parochial school, and any city, village, business or nonprofit organization that organizes or sponsors an athletic activity for youth age 19 or younger shall:
 - Make available to all team coaches training, approved by the state’s chief medical officer, on how to recognize the symptoms of a concussion or brain injury and how to seek proper medical treatment.
 - Require that information on concussion signs, symptoms and risks and actions a student should take following a concussion be provided annually to students and their parents/guardians prior to initiation of sports practice or competition.
2. A youth who participates on an athletic team falling under the aegis of the law shall be removed from a practice or game if he or she is reasonably suspected of having sustained a concussion or brain injury. In addition, the youth’s parent or guardian must be notified of the date and approximate time of the injury suffered, the signs/symptoms observed and any action taken to treat the youth. The youth may not be permitted to participate in any team athletic activities involving physical exertion (and falling under the aegis of the law) until he or she provides written clearance to do so from a licensed health care professional and written permission from a parent or guardian.

IMPETUS FOR POLICY EVALUATION

“Although the Concussion Awareness Act received strong community and legislative support, it was passed without funding to support the training for coaches or other requirements of the law. In addition, the act stipulates no penalties for noncompliance. Said Ogea-Ginsburg, “There was interest by stakeholders and partners to figure out if it was being implemented and if school policies were being changed because of it. We also wanted to know if there were things we needed to change or improve in the implementation. What assistance do schools need?”

In practice, the evaluation addressed three broad questions: (1) To what extent were coaches, athletic trainers, parents and youths receiving concussion education or training? (2) To what extent were athletes being removed from play, and returned to play with appropriate clearances, in accord with the law? (3) To what extent were schools and organizations implementing new policies to facilitate compliance with the law?

EVALUATION PROCESS

The first step, said Ogea-Ginsburg, was convening a workgroup:

“We pulled together the key partners we thought would be able to help us and have input into the process: the Brain Injury Association of Nebraska, the Nebraska School Activities Association and the Nebraska State Athletic Trainers Association. We included the DHHS school and adolescent health coordinator, who has contact with school nurses, and the evaluator for the state injury prevention program. We also had our program epidemiologist, of course. Nobody required coaxing. A lot of them were involved in developing and passing the legislation. They were invested. I think we did get the right partners.”

Although no high school parents or students were invited to join the group, several group members happened to be parents of children active in school sports. Schmeckle Research, an independent firm, was already under contract with the Nebraska DHHS Injury Prevention Program and provided technical assistance throughout the evaluation process.

Ultimately, the evaluation consisted of three surveys, each targeting a different audience:

- Head coaches at high schools across the state.
- High school athletic directors across the state.
- Youth listed in the Nebraska Traumatic Brain Injury Registry as having had a sports-related concussion.

As with any survey-based evaluation, the two major considerations were the content of the questionnaires and the mechanics and timing of survey administration, as these would directly impact the quality and quantity of data collected.

The starting point for the questionnaires was “What do we want to do with the information?” Thus, the two high school surveys focused on issues related to compliance with the new law. The heads

Survey data showed that schools are starting to address problems on the field, but there is mixed support once they come back to the classroom. There can be cognitive damage if too much is required of students too quickly after a concussion. Their brains need to rest.

of the state athletic trainers association and the Brain Injury Association of Nebraska had been heavily involved in developing the Concussion Awareness Act and knew its history, intent and limitations. Both were instrumental in crafting survey questions. Ogea-Ginsburg said, “We wanted (the high school surveys) to be 20 questions, but we ended up with between 30 and 40 questions. There were so many things individuals in our workgroup wanted to know, so we honored that. We tried to be critical, so we weren’t asking nice to know kind of questions, so it wasn’t longer than it needed to be. Everything turned out to be interesting.”

The Nebraska School Activities Association, an umbrella organization that sanctions and regulates school sports in Nebraska, was integral in administering the two high school surveys. The association disseminated the surveys through an online survey tool with a “cover letter” from the group’s associate director (whose name was known to respondents). The use of the tool was based on ease of administration, ease of use for respondents and cost-effectiveness. The survey was sent out in early April—between major sports seasons—and left open for three weeks, with three reminders sent, also under the name of the Nebraska School Activities Association associate director. In particular, the workgroup was eager to get responses from coaches of the major sports associated with head injuries: soccer and football.

The youth concussion questionnaire was developed by the entire evaluation workgroup and was conducted and paid for by the Brain Injury Association of Nebraska, which already had a relationship with many families of brain-injured youth and saw the survey as another opportunity to inform families of the association’s services. All of the data obtained from the youth survey were anonymous to protect the identities of injured youth.

Since e-mail addresses are not included in the registry, a paper copy of the survey was sent via the U.S. Postal Service, with a cover letter signed by the Brain Injury Association of Nebraska director and containing a link to an online version of the survey. Because the group wanted to wait a full academic year before gauging the impact of the new law, the questionnaire and cover letter were mailed in July 2013. They were sent to all those in the Nebraska Brain Injury Registry under age 19 with sports-related head injuries with suspected concussion incurred within the past year (covering the 2012-2013 academic year)—a total of about 600 individuals. A reminder letter, with the link but not the paper survey, was mailed later the same month.

CHALLENGES

The Nebraska Brain Injury Registry was an obvious, but imperfect, tool to assess the impact of the Concussion Awareness Act on youth athletes themselves. Imperfect because (a) the registry only lists individuals who sought medical care for a head injury and (b) the registry does not distinguish between injuries sustained in organized sports events (such as a high school football practice, which would be subject to the new law) versus those sustained in informal sports activities (such as an impromptu game of backyard soccer, which would not be subject to the new law). Despite these limitations, however, the registry was easy to access and highly cost-effective; there was no viable alternative.

EVALUATION FINDINGS AND OUTCOMES

Survey response rates were as follows:

- High school head coach survey—46 percent (n=1,074).
- High school athletic director survey—53 percent (n=164).
- Youth survey—16 percent as of September 2013 (n=94). (82 percent of youth survey respondents were male; 41 percent aged 11–14 years old and 53 percent aged 15 to 18 years old.)

The most important survey findings are summarized below as they pertain to the three overarching evaluation questions. (All percentages refer only to survey respondents.)

Coach training

- 94 percent of high school athletic directors reported that their school has made concussion training available to coaches at their school, and, among these, 77 percent reported that such training is mandatory.
- 92 percent of high school coaches reported that their school made concussion training available before the start of practice and, among these, 77 percent reported that such training is mandatory.
- 87 percent of high school coaches who participated in concussion training reported that the training improved their ability to recognize concussion signs and symptoms.
- 73 percent of high school coaches were provided training on the requirements of the Nebraska Concussion Awareness Act.

Parental/youth education

- 90 percent of high school athletic directors reported that their school provides education to parents and students about concussion signs and symptoms before the start of practice.
- 77 percent of youth survey respondents reported that they received information about concussion signs and symptoms before beginning practice for their sport.
- 13 percent of high school coaches reported that the parents of an athlete with a suspected concussion have tried to stop them from removing their child from play, and 23 percent reported that parents have tried to return their child to play without medical clearance, following a suspected concussion.
- 29 percent of high school coaches reported knowledge of an athlete not reporting a possible concussion in order to continue playing, and 44 percent reported having an athlete resist removal from play following a possible concussion.
- 22 percent of youth survey respondents reported instances when they experienced the symptoms of a concussion, but did not report them to a coach or athletic trainer. Of these, 68 percent thought their symptoms were not serious.

Removal from play/return to play

- 91 percent of high school coaches reported that they know their school's policy on removal from play and return to play for athletes with a suspected concussion.
- 87 percent of high school coaches reported having removed an athlete from play due to a suspected concussion.
- 85 percent of youth survey respondents reported that they were removed from play after sustaining a concussion; 70 percent reported *immediate* removal.
- 95 percent of high school athletic directors reported that their school requires an athlete with a suspected concussion to be cleared by a health care professional before returning to play.
- 69 percent of high school athletic directors reported that their school always requires parents to provide written approval before their child returns to play following a suspected concussion.
- 87 percent of youth survey respondents reported that their parents/legal guardians were notified when they were first suspected of sustaining a concussion.

Policy development

- 63 percent of high school athletic directors reported that their school has a formal written policy for

removal and return to play for athletes with suspected concussions. Among these, 79 percent reported that the policy was developed as a result of the Concussion Awareness Act.

Overall, Ogea-Ginsburg said workgroup partners are “happy with the quality of data,” which will inform continued policy implementation work. Data show the new law has had a definite impact on school policies, but also reveal gaps in policy implementation, particularly regarding coach training and parental/youth education. One concrete outcome of the evaluation was a decision by the Nebraska School Activities Association board of directors to make concussion awareness training mandatory for all school coaches beginning fall 2013.

NEXT STEPS

Ogea-Ginsburg said workgroup partners are discussing how best to disseminate survey findings to the media and to partners and other stakeholders. They are also planning to conduct a longer-term evaluation on the law's direct impact on youth and on concussion-related policies and practices among organizations that sponsor youth sports, such as the YMCA—a more complicated undertaking, as there is often no umbrella organization for these groups equivalent to the Nebraska School Activities Association.

Data already collected will inform efforts to reduce second-impact concussions and to assure students receive appropriate support once they return to the classroom after sustaining a concussion. For example:

- 60 percent of high school athletic directors reported that their school notifies teachers when an athlete with a suspected concussion returns to the classroom.
- 34 percent of high school athletic directors reported that their school has a designated person for concussion management to assist student athletes when they return to school.
- 44 percent of high school coaches reported being always or often notified when a student athlete suffers a concussion in another sport.
- 76 percent of high school athletic directors reported that their school keeps concussion histories for all student athletes.

Said Ogea-Ginsburg, “Survey data showed that schools are starting to address problems on the field, but there is mixed support once they come back to the classroom. There can be cognitive damage if too much is required of students too quickly after a concussion. Their brains need to rest. They might possibly need modifications to their school day based on their recovery. Return to learn is the next phase.”

OHIO

Regulating Prescription Drugs



OVERVIEW

CDC CHARACTERIZES PRESCRIPTION PAINKILLER OVERDOSES as a “public health epidemic,” associated with nearly half a million emergency department visits in 2009 and more than \$72 billion in direct health care costs each year.¹

Among the groups at highest risk are middle-aged adults, especially middle-aged men living in rural counties.² To curtail the problem, CDC recommends states pass, and enforce laws to reduce prescription painkiller abuse, such as those that address pill mills and doctor-shopping.³

In May 2011, the Ohio legislature followed the first part of that advice, passing House Bill 93. Cameron McNamee, an Ohio Department of Health injury prevention policy specialist, explained the local impetus for the law: “We had been noticing a dramatic increase in unintentional overdose deaths, centered on southern Ohio, and one rural county in particular, which had the highest overdose rate in the state... One of the biggest problems in this county was pill mills—cash-only businesses often operated in strip malls or hotel rooms. They were basically drug dealers, operating in a grey area of the law, and they were devastating this small county.” In addition, he said, “people were driving down there to get pills, and they were starting to set up in other counties and attracting other unscrupulous prescribers.”

Ohio’s then-governor was from that “devastated” county and set up a task force to investigate the problem. The group ultimately recommended more rigorous state oversight of pain management clinics and the dispensing of prescription painkillers. The succeeding governor “put a renewed spotlight on the issue,” and HB 93 was passed with strong legislative support.

POLICY

HB 93 addressed more than a dozen aspects of painkiller misuse. The most critical provisions are summarized below:

- The Ohio Board of Pharmacy is required to license pain management clinics as terminal distributors of dangerous drugs. Failure to comply with the board's licensing rules will result in a fine of up to \$5,000. In addition, the law authorizes the Board of Pharmacy to suspend, without prior hearing, the license of a wholesaler of controlled substances or terminal distributor of dangerous drugs, if it determines there is a danger of immediate and serious harm to others.
- The Ohio Board of Medicine is required to establish standards for physician operation of pain management clinics and for physicians who provide care at such clinics. Failure to meet the board's standards will result in a fine of up to \$20,000. In addition, the Board of Medicine is permitted to take disciplinary actions based on actions of other entities regulating any health care profession or service. The law clarifies the board's authority to suspend, without a prior hearing, a person's authority to practice medicine.
- Applicable licensing agencies are required to adopt rules specifying when a prescriber or pharmacist must review information in the Ohio Automated Rx Reporting System to assess a patient's prescription drug usage.
- The Ohio Bureau of Workers' Compensation, the Ohio Medicaid managed care organization and the Ohio Medicaid fee-for-service program are each required to establish a coordinated services program for individuals who obtain prescription drugs at a frequency or in an amount that is not medically necessary. (The coordinated services program limits these excessively "high-use" patients to a single painkiller prescriber and a single fulfillment pharmacy.)

The bill was passed with an emergency clause, mandating that some provisions take effect immediately upon enactment. Other provisions became effective 30 days after enactment to give regulatory boards time to set up mandated oversight systems.

IMPETUS FOR POLICY EVALUATION

"This policy was the governor's priority across two administrations," said McNamee. "Because the issue is so new and complex, we wanted to look at what we were doing at the state level and see if it was effective and also to reinforce the policymakers' and governor's resolve by demonstrating actions are having an effect."

EVALUATION PROCESS

Because the new law had so many provisions, evaluators homed in on five key questions for which they knew data were available:

- To what extent is the Ohio Board of Medicine using its newly enhanced authority to take action against inappropriate prescribing of painkillers? *Data source:* Ohio Board of Medicine prescribing issue actions for 2010, 2011, 2012.
- To what extent are prescribers and pharmacists registering to use and using Ohio Automated Rx Reporting System? *Data source:* Ohio Automated Rx Reporting System
- How many Ohio patients have at least 10 unique prescribers (an indication of doctor shopping)? How many have at least 20 unique prescribers? *Data source:* Ohio Automated Rx Reporting System
- To what extent is the Ohio Bureau of Workers' Compensation seeing fewer claims for prescription painkillers? As part of the new law, the Ohio Medicaid program and the Ohio Bureau of Workers' Compensation were required to establish a coordinated services program locking high-use patients into a single painkiller prescriber and a single fulfillment pharmacy. Because of an existing relationship with BWC, the evaluation team focused exclusively on BWC data. In fact, since 35- to 54-year-olds were known to be over-represented among painkiller users — in large part because of on-the-job injuries — BWC data was a good source of information on a high-risk population. *Data source:* Ohio Bureau of Workers' Compensation
- Did the average prescription analgesic morphine equivalence of opioids dispensed in Ohio — and in individual Ohio counties — decrease after implementation of the law? *Data source:* Ohio Automated Rx Reporting System

Since the health agency had been working on the issue of painkiller misuse for several years, relationships with the major data owners were already in place. "We reached out to them," said McNamee. "They were more than happy to work with us. It was important that we already had those relationships."

The Ohio Bureau of Workers' Compensation, the Ohio Medicaid managed care organization and the Ohio Medicaid fee-for-service program are each required to establish a coordinated services program for individuals who obtain prescription drugs at a frequency or in an amount that is not medically necessary.

Principal evaluation partners were the Ohio Department of Health, which spearheaded the evaluation; the Ohio Board of Pharmacy, which controls Ohio Automated Rx Reporting System data; the Ohio Bureau of Worker's Compensation; the Ohio Board of Medicine; the governor's point person on painkiller misuse; and the Ohio Department of Mental Health & Addiction Services. Importantly, the Department of Mental Health & Addiction Services had an internal team already working on the issue, and that team included statisticians familiar with the evaluation data sources.

The partners had just one in-person meeting to review the health agency's data requests, and subsequent communication was by phone and email. Partners, said McNamee, "were very responsive."

CHALLENGES

Both the health agency epidemiologist and the governor's point person moved on to new positions in the midst of the evaluation, complicating the process. In particular, McNamee said, "Because we requested data without having our epidemiologist present, we didn't ask for individual (de-identified) records from the Ohio Automated Rx Reporting System. Therefore, we could look at trends, but couldn't determine statistical significance. We needed a larger dataset." (The team couldn't evaluate statistical significance without knowing the mean, standard deviation and N values of the data pre- and post-implementation of the law. They had only the mean values.)

In addition, the Ohio Bureau of Worker's Compensation instituted more stringent drug reimbursement policies and other changes related to prescribing in late 2011, independent of the new law. "HB 93 might have contributed to changes (in painkiller use), but at what level?" asked McNamee. "It was difficult to work out."

EVALUATION FINDINGS AND OUTCOMES

Overall, McNamee said the data reveal "promising trends," but that it is too soon to gauge the full effect of the law, particularly as there was a delay in implementing some of the mandated new oversight rules, which the evaluation team did not anticipate during the planning process.

Actions against inappropriate prescribing of painkillers

- The Ohio Board of Medicine issued 28 prescribing actions in 2010 (13 percent of all board actions imposed that year), 38 in 2011 (18 percent of total actions) and 41 in 2012 (22 percent of total actions).

Ohio Automated Rx Reporting System registration and use

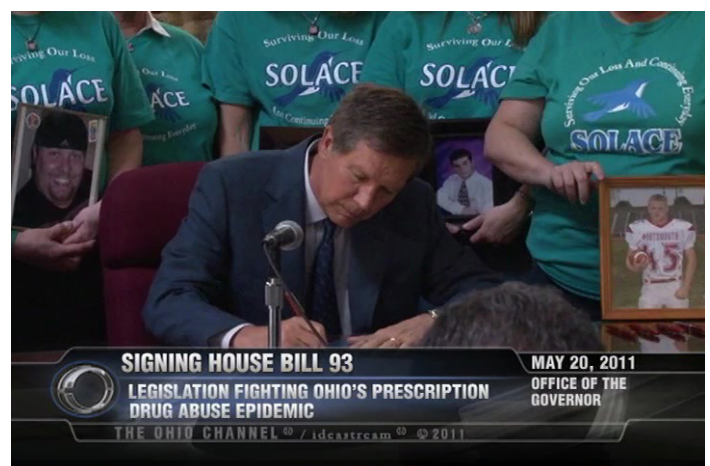
- The number of prescribers (and their delegates) registered in Ohio Automated Rx Reporting System increased from 8,044 in 2010 to 11,055 in 2011 to 18,875 in 2012.
- The number of prescribers (and their delegates) who used Ohio Automated Rx Reporting System increased from 5,709 in 2010 to 7,433 in 2011 to 10,893 in 2012.

Patients with ≥10 or ≥20 Unique Prescribers

- The number of Ohio patients with opioid prescriptions from 10 or more unique prescribers decreased from 12,585 in 2010 to 12,435 in 2011 to 11,360 in 2012.
- The number of patients with opioid prescriptions from 20 or more unique prescribers decreased from 954 in 2010 to 877 in 2011 to 756 in 2012.

Worker Compensation Claims

- The number of claims submitted to the Ohio Bureau of Worker's Compensation for reimbursement for prescription opioids declined by 13.1 percent between 2010 and 2012. This reduction was associated with an



The health department evaluation team is also represented on a governor’s “metrics committee” and is providing input into the committee’s evaluation of a host of activities related to curbing prescription drug abuse statewide.



18.2 percent decline in the number of opioid prescriptions subject to Ohio Bureau of Worker’s Compensation review for reimbursement and a \$9.5 million cost-savings.

Mean Prescription Strength

- The average prescription analgesic morphine equivalence (as established by CDC) for prescriptions dispensed in Ohio increased between 2010 and 2011 and decreased between 2011 and 2012, although not completely back down to the 2010 level.
- The average prescription analgesic morphine equivalence for prescriptions dispensed in Scioto County,

which had the highest drug overdose rate of all Ohio counties in 2011, fell 18.4% between 2010 and 2012.

NEXT STEPS

The health department evaluation team incorporated its findings into fact sheets and also shared findings with the state injury prevention coalition’s drug abuse action group, which includes community advocates. Those community advocates, in turn, are sharing findings at the local level. The health department evaluation team is also represented on a governor’s “metrics committee” and is providing input into the committee’s evaluation of a host of activities related to curbing prescription drug abuse statewide. The metrics committee will report back to the governor and perhaps the state legislature and professional societies representing health care providers.

McNamee said his team is “constantly in evaluation mode with prescription drug abuse undertakings. We need a few more years of solid data to see definitive trends.”

References

- 1 CDC. Prescription Painkiller Overdoses in the U.S. Atlanta, GA: www.cdc.gov/features/vitalsigns/painkilleroverdoses/.
- 2 Ibid.
- 3 Ibid.

RHODE ISLAND

Making a Primary Belt Law Permanent



OVERVIEW

MOTOR VEHICLE CRASHES ARE THE LEADING CAUSE OF DEATH for people ages 5 to 24 in Rhode Island and in the United States.¹

The single most effective way to reduce motor vehicle crash fatalities and injuries is safety belt use, which reduces the risk of death and serious injuries by 50 percent.²

The Centers for Disease Control and Prevention has identified “reducing motor vehicle injuries” as one of ten winnable battles. Reducing motor vehicle crash-related injuries and deaths, increasing use of safety belts, and increasing use of age-appropriate vehicle restraint systems for children are all Healthy People 2020 objectives.

More than 30 U.S. states have a primary safety belt law, which allow law enforcement officers to stop and ticket drivers solely for safety belt violations. All other states have a secondary law, which allows law enforcement officers to cite motorists for safety belt violations only if they have been stopped for another reason.³ A systematic review conducted for the Community Preventive Services Task Force found that primary safety belt laws increase observed safety belt use by about 14 percent and decrease fatal injuries by about 8 percent, compared with secondary laws.⁴

Rhode Island’s primary safety belt law was passed in July 2011, with the support of the Rhode Island Department of Transportation, American Automobile Association of Southern New England, Mothers Against Drunk Driving, state and local law enforcement agencies and the Rhode Island Department of Health Violence and Injury Prevention Program. However, because civil liberties groups and the state’s Black Legislative Caucus expressed concerns about possible racial profiling, the law included a sunset clause, making it expire automatically in July 2013 absent further legislative action.

POLICY

The key provisions of Rhode Island’s primary safety belt law are:

- Children under the age of 8 must be transported in a rear seating position, either in a child restraint system approved by the US Department of Transportation (if the child is less than 57 inches tall and less than 80 pounds) or properly wearing a safety belt and/or shoulder harness (if the child is at least 57 inches tall or weighs at least 80 pounds). Any person deemed in violation of this provision shall be issued a citation and shall be fined, unless he or she presents proof of purchase of a federally approved child restraint system within seven days of citation issuance. In no case will the offense be recorded on an individual’s driving record.
- The Ohio Board of Medicine is required to establish standards for physician operation of pain management clinics and for physicians who provide care at such clinics. Failure to meet the board’s standards will result in a fine of up to \$20,000. In addition, the Board of Medicine is permitted to take disciplinary actions based on actions of other entities regulating any health care profession or service. The law clarifies the board’s authority to suspend, without a prior hearing, a person’s authority to practice medicine.
- Children aged 8–17 and adults aged 18 or older must properly wear a safety belt and/or shoulder harness system, including any operator of a motor vehicle. Any person deemed in violation of this provision shall be fined, but the violation shall not be recorded on that person’s driving record.
- In no event shall failure to be properly restrained be considered as negligence or be admissible as evidence in the trial of any civil action.
- No motor vehicle shall be stopped to determine compliance with the law without reasonable suspicion of a violation. Moreover, a law enforcement officer may not search a motor vehicle, its contents, the driver or a passenger solely because of a violation of this law.

IMPETUS FOR POLICY EVALUATION

“A public health coalition was formed to evaluate the impact of Rhode Island’s primary safety belt law to demonstrate its value and gather evidence to convince the legislature to make the law permanent. Said Jennifer Koziol, the state’s Violence and Injury Prevention Program coordinator, “We were very excited that the bill had passed, but we knew we couldn’t totally celebrate the success because of the expiration date in two years.”

EVALUATION PROCESS

Violence and Injury Prevention Program staff worked with many of the law’s original supporters throughout the evaluation process. The RIDOT was an “essential” partner. Deborah Pearlman, the program’s epidemiologist, noted that evaluation questions were based on data availability:

- Have motor vehicle fatalities decreased since passage of the law? *Data source:* Fatality Analysis Reporting System overseen by RIDOT, national data compiled by the National Highway Traffic Safety Administration and analyzed in-state.
- Are there fewer serious crash-related injuries since passage of the law? *Data source:* RIDOT Crash Data Management System, which was deemed to correlate more directly with the outcome of interest than hospital data.
- Has the safety belt usage rate increased since passage of the law? *Data source:* Rhode Island Office of Highway Safety data collected as part of NHTSA’s National Occupant Detection Observation Survey. Although a question on safety belt use is included in the Behavioral Risk Factor Surveillance System survey, these data are compiled on a yearly, rather than monthly basis. Therefore, they would be difficult to use to assess changes associated with a law enacted mid-year.
- Has there been an increase in racial profiling related to law enforcement vehicle stops, since passage of the law? *Data source:* Rhode Island law enforcement database.

Two additional evaluation questions were considered, but deemed unworkable:

- Has there been a change in the percentage of patients seen in hospital emergency departments versus inpatient admissions for motor vehicle injuries, since passage of the law? *Rationale:* Rhode Island requires all acute care and specialty hospitals operating in the state (except Veterans Administration hospitals) to submit emergency department and hospital discharge

A public health coalition was formed to evaluate the impact of Rhode Island's primary safety belt law to demonstrate its value and gather evidence to convince the legislature to make the law permanent.

data to the state health agency for epidemiological surveillance purposes. Evaluators considered using the inpatient data as a proxy for injury severity: patients with less severe injuries would be discharged from the emergency department, while those with more severe injuries would be admitted for more intensive care. However, Pearlman said, “This is the kind of question I’d like to look at five years out; it’s going to take several years before you’re going to start seeing a change in health care utilization after implementing a policy like a primary seat belt law.”

- What is the extent of the public’s knowledge about the law and attitudes toward it? *Rationale:* Said Pearlman, “The thing that was unique about the law was this sunset clause; everyone knew it was expiring. We had no sense how that expiration date affected public compliance.” However, despite the importance of the question, there was no immediately available data source and no resources to explore the question otherwise.

CHALLENGES

The evaluation team faced a hard deadline: The primary safety belt law was set to expire in July 2013 and would be scheduled for a vote sometime before then. (The bill actually came up for renewal in April 2013.) This deadline complicated the evaluation process in at least three ways. First, evaluators did not have enough time or resources to assess the law’s implementation or public knowledge and attitudes about the law; there were concerns that the well-known sunset clause may have undermined police enforcement or public compliance or both. Had resources been available, the evaluators would have liked to conduct one-on-one key informant interviews or focus groups with a sample of police officers responsible for enforcing the law.

Second, it was RIDOT’s responsibility to work with law enforcement agencies to collect data on the race/ethnicity of persons stopped for violating the law. This effort required a time-consuming overhaul of an electronic law enforcement data collection system to accommodate a new data field indicating if a driver were stopped because of a safety belt violation. Data collection did not begin until fall 2012—too late to produce sufficient data for the immediate evaluation effort.

Third, RIDOT received \$1 million in new NHTSA funding upon passage of the law, dedicated to educating minority populations about the new safety belt use requirement. Rather than conduct its own educational campaign, RIDOT funneled the money directly to community-based organizations for use at the local level. Though well-intentioned, this strategy created a delay, as the agency issued a request for proposals and evaluated the proposals before disbursing the funds in summer 2012. There wasn’t much time for community groups to ramp up educational activities before the law came back before the state legislature.

Throughout 2012, the state used digital highway signs for dynamic messaging, reminding people to buckle up, reporting the number of recent traffic fatalities, etc. Pearlman said, “We had hoped to do some sort of linking between when those messages were broadcast and if there was variability in severity of crashes. That was overly ambitious (given time and resource constraints).”

In addition to the challenges posed by the legislative calendar, the evaluation team noted that the NHTSA and RIDOT data itself was problematic, requiring extensive “cleaning up” to address missing and inconsistent information.

EVALUATION FINDINGS AND OUTCOMES

Given the many caveats listed above, evaluation findings were considered inconclusive as to the effect of the primary safety belt law.

Motor vehicle fatalities

- In 2010, there were 39 crashes with at least one fatality, and no restraint was used in about two thirds of these (67 percent). In 2011, there were 37 fatal crashes, with a decline in the number without restraints in use (62 percent). While the decline in the absolute number of fatalities is modest, it represents a 6 percent decline over a one-year time period.

Serious crash-related injuries

- The percentages of incapacitating, non-incapacitating but serious, minor and no injuries among vehicle occupants ages 13 and older were virtually unchanged between the 18-month period before passage of the law and the 18-month period after passage.

In addition, the law authorizes the Board of Pharmacy to suspend, without prior hearing, the license of a wholesaler of controlled substances or terminal distributor of dangerous drugs, if it determines there is a danger of immediate and serious harm to others.

Safety belt usage rate

- From 2010 to 2011, the safety belt use rate increased slightly from 78 to 80 percent, but returned to the 2010 rate of about 78 percent in 2012.

Racial profiling

- Rhode Island began collecting data on safety belt violations—including the perceived race of the driver—in October 2012, and Northeastern University was engaged to analyze the data. However, results were not available as of summer 2013.

Research shows that a primary safety belt law is only successful with high visibility enforcement and publicity campaigns, which were probably insufficient during the trial period of the Rhode Island law.⁵ In defending the new law, advocates stressed overwhelming national evidence of effectiveness and lack of evidence of differential enforcement.⁶

In June 2013, the Rhode Island legislature voted to make the primary safety belt law permanent on the basis of testimony from law enforcement officers, state health officials and state residents who had lost loved ones who were not wearing safety belts during auto crashes. The legislature reduced the fine for violations from \$85 to \$40—still high enough to qualify Rhode Island for certain grants and to effect behavior change, according to NHTSA data.⁷ The governor signed the law July 2, 2013.

NEXT STEPS

The Violence and Injury Prevention Program continues to partner with the state traffic safety coalition—and especially with RIDOT and law enforcement coalition members—to increase awareness of the law. “We want to get the message across that this is a primary offense,” said Koziol. “Not just ‘Click it or Ticket.’” RIDOT-funded, community-based activities are now underway, and funded organizations are required to conduct their own evaluations of the success of those efforts.

The program also continues to monitor traffic fatalities via FARS, primary belt enforcement racial data via the Rhode Island law enforcement database and safety belt usage via data collected for NHTSA’s National Occupant Detection Observation Survey. As Koziol noted, the rate of safety belt usage in 2011—the new baseline year—was 80percent for Rhode Island overall, 74 percent for blacks in Rhode Island, 78 percent for non-whites in Rhode Island (including blacks), and 85 percent nationwide. The long-term goal, she said, is to bring all Rhode Island usage rates—including for minority populations—up to “at least what the national average is” by 2015.

Koziol said the state traffic safety coalition would like to conduct a qualitative evaluation of law enforcement and public knowledge and attitudes toward the law—both currently and in the longer-term, after educational efforts have been underway for some time—but this effort is contingent on new funding.

References

- 1 CDC. Wisqars Death Data, 2008-2010. Atlanta, GA: www.cdc.gov/injury/wisqars/index.html.
- 2 CDC. Policy Impact: Seatbelts. Atlanta, GA: www.cdc.gov/motorvehiclesafety/seatbeltbrief/index.html.
- 3 Governors’ Highway Safety Association. Highway safety laws by state. Washington, DC: <http://ghsa.org/html/stateinfo/bystate/index.html>.
- 4 Task Force on Community Preventive Services. Motor-vehicle occupant injury. In: Zaza S, Briss PA, Harris KW, eds. *The Guide to Community Preventive Services: What Works to Promote Health?* Atlanta, GA: Oxford University Press, 2005. Available at: www.thecommunityguide.org/mvoi/Motor-Vehicles.pdf.
- 5 Nichols JL, Tippetts AS, Fell JC, Auld-Owens A, Wiliszowski CH, Haseltine PW, Eichelberger A. Strategies to Increase Seat Belt Use: An Analysis of Levels of Fines and the Type of Law. Report No. DOT HS 811 413. Washington, DC: National Highway Safety Administration, November 2010.
- 6 Tison J, Williams AF, Chaudhary NK, Nichols JL. Determining the Relationship of Primary Seat Belt Laws to Minority Ticketing. Report No. DOT HS 811 535. Washington, DC: National Highway Traffic Safety Administration, September 2011.
- 7 National Highway Traffic Safety Administration. Traffic Tech Technology Transfer Series, Number 400. Washington, DC: National Highway Safety Administration, November 2010. Available at: http://www.nhtsa.gov/staticfiles/traffic_tech/TT400.pdf.



CONCLUSION

The foregoing case studies show that in public health, data matter. In these cases, national and state data documented the value of specific interventions and pinpointed areas needing greater emphasis, such as education for Nebraska parents regarding the risks of traumatic brain injury.

The case studies also highlight several lessons learned that can facilitate successful policy evaluation:

- Engage partners, especially data owners, individuals with experience working with key data sources, individuals who serve as gatekeepers to target survey populations and individuals familiar with policy provisions and the context for policy enactment.
- Don't base evaluations on unfamiliar data sources; assess each data source to gauge its strengths and limitations before committing to use it. (Or rely on a partner with data expertise and familiarity with the data source to advise the evaluation team.)
- Allow ample time for policy implementation before conducting outcome evaluation. (Evaluators may consider a preliminary process evaluation.)
- Consider short-term, medium-term and long-term evaluation priorities.
- Discard questions that cannot reasonably be answered due to lack of a data source or prohibitive expense, such as questions that necessitate time- and resource-intensive methodologies.
- Disseminate findings to evaluation partners, policymakers, funders and other important stakeholders, including the public.

Perhaps the most important lesson is this: don't stop evaluating. As conditions change within the community and as new best practices arise, policies may need to be updated. Moreover, the policy implementation itself may grow inconsistent over time and require reinvigoration. Hard data illuminate the status quo, provide the means for accountability and inform decision-making to protect the public from needless violence and injuries.

ABOUT APHA

THE AMERICAN PUBLIC HEALTH ASSOCIATION champions the health of all people and communities. We strengthen the profession of public health, share the latest public health research and information, promote best practices and advocate for public health issues and policies grounded in research. Our members represent all public health disciplines and more than 40 countries. Learn more at www.apha.org.

