2014 GUIDE TO STATE ADVERSE EVENT REPORTING SYSTEMS

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INTRODUCTION

Health care in the United States is not as safe as it could—or should—be. The number of premature deaths associated with preventable harm to patients in hospitals is estimated at more than 400,000 per year,1 making medical errors the third-leading cause of death in America, behind only heart disease and cancer.2 According to the National Quality Forum (NQF), approximately two million healthcare-associated infections occur annually in the United States, accounting for an estimated 90,000 deaths and more than $4.5 billion in hospital healthcare costs.3 State governments are among the stakeholders concerned about the human and economic toll of these events. As large purchasers, regulators, conveners, and providers of health care services, states have unique opportunities to improve patient safety and safeguard the public.4 One strategy in place in just more than half of states is the implementation of an adverse event reporting system. This report describes the status of and trends in state adverse event reporting systems as of November 2014.

In 1999, the Institute of Medicine (IOM) called for a nationwide, mandatory reporting system for state governments to collect standardized information about adverse medical events5 resulting in death and serious harm.6 The IOM’s call for this national system has not been heeded, but since that report, some individual states have made progress in standardizing reportable events, improving follow-up on events and broadening the scope of facilities from which they collect these data.

PROJECT OVERVIEW

Since the 1999 IOM report, the National Academy for State Health Policy (NASHP) has tracked and monitored state progress and provided support to states on patient safety issues through reports, technical assistance, a patient safety discussion group for state officials, a patient safety toolbox, and conferences and workshops. NASHP last released a guide to state adverse event reporting systems in 2007.

In June 2014, the Betsy Lehman Center for Patient Safety and Medical Error Reduction (BLC) engaged NASHP to build upon its 2007 work by collecting updated information about all state adverse event reporting systems in effect as of that time. The BLC is a Massachusetts government agency established in 2004 with a broad mandate to improve patient safety in the state. The center is named after Betsy Lehman, a well-known healthcare reporter at the Boston Globe who died in 1994 as a result of an overdose of chemotherapy, a highly publicized event that focused new attention on patient safety. The BLC was interested in current comparative data that could inform Massachusetts policy and recognized that other states might value the research findings.

In 2014, NASHP surveyed all 50 states and the District of Columbia to develop insight into the nation’s monitoring, regulation and promotion of patient safety, with a focus on adverse event reporting systems. For the purposes of this research, a state adverse event reporting system is defined as a system authorized by, and usually operated by, state government to collect reports from hospitals (and in some cases other types of facilities such as ambulatory surgical centers) about adverse events, with the intent of improving patient safety.7 An official from each known state adverse event reporting system completed NASHP’s survey, for a total of 27 responses.8 Additionally, NASHP administered a separate one-question electronic survey of health care licensing and certification officials in the remaining 23 states to verify that they currently do not have an adverse event reporting system. Each of these 23 states confirmed that it does not have an adverse event reporting system. Wyoming communicated to NASHP separately that its adverse event reporting system had sunset since the 2007 report. For this reason, NASHP did not include that state in either survey.
The following sections describe the results of the 2014 survey, compare results to 2007 findings, and highlight salient state examples, including in Massachusetts.

### Key Findings

- The number of adverse event reporting systems has not changed since 2007, with 27 systems still in place. One new system has been implemented and one system ended. One additional system will be active beginning in January 2015, which will bring the total number of systems to 28.

- There continues to be wide variation in the types of individual events reported to states. In 2014, 15 states have adopted or adapted the National Quality Forum’s list (discussed further on page 7)—a slight increase from 2007.

- Reporting systems are now more technologically advanced than in 2007. Twenty-two systems are now partially or fully electronic, compared to nine in 2007.

- Communication of findings to providers and the public continues to be common, with 22 systems publicly reporting data and 20 sharing system data with facilities. Eight states have increased the frequency of public reporting since 2007.

- Formal evaluations of reporting systems are rare (three states), however officials from most (23) systems have anecdotal, survey or other sources indicating an impact on communication among facilities, provider education, internal agency tracking or trending, and/or implementation of facility processes to address quality of care. Nine states report increased levels of provider and facility transparency and awareness of patient safety as a result of their reporting systems.

- System officials partner with provider, patient safety, and state agency representatives to carry out patient safety initiatives. Despite potential opportunities in delivery system and payment reform, there are few specific examples of states integrating adverse event reporting systems with statewide quality improvement or other initiatives that demonstrate the importance of patient safety as a crosscutting statewide priority.
Survey results and communication with all 50 states reveal that the number of state adverse event reporting systems did not increase between 2007 and 2014. As in 2007, NASHP identified 27 adverse event-reporting systems in 26 states and the District of Columbia (See Figure 1). Since the 2007 report, Wyoming’s reporting system has sunset and New Hampshire established its first adverse event reporting system. Although Texas did not have a system in place as of November 2014, it is implementing one beginning January 2015. Oregon’s adverse event reporting system is voluntary, while the remaining 26 systems are mandatory. Massachusetts is the only state with two reporting systems (see text box on next page); this report references information related primarily to the system administered by the Massachusetts Department of Public Health’s Bureau of Healthcare Safety and Quality.

Table 1: Adverse Event Reporting Systems Authorized in 2000, 2007, and 2014

<table>
<thead>
<tr>
<th>15 authorized event reporting systems in 2000 (including several that focused solely on abuse, neglect, or clinical outcomes, not adverse/patient safety events)</th>
<th>27 authorized adverse event reporting systems in October 2007 (only those systems that focus on adverse events with the intent to improve patient safety)</th>
<th>27 authorized adverse event reporting systems in November 2014 (only those systems that focus on adverse events with the intent to improve patient safety)*</th>
</tr>
</thead>
</table>

*Texas also will have an adverse event reporting system in place beginning January 2015.
Reporting Systems in Massachusetts

Massachusetts is the only state that requires some types of health care facilities to report adverse events to two agencies. Interaction and information sharing between the entities leading each system is limited. The systems are duplicative in function but differ in terms of reportable event lists, reporting mechanism, funding, and the analysis, sharing and use of data.\textsuperscript{11}

The Department of Public Health (DPH)'s Bureau of Healthcare Safety and Quality administers a mandatory reporting system for the reporting of incidents, called Serious Reportable Events (SREs)\textsuperscript{12} that drastically affect the health and safety of patients in hospitals and ambulatory surgical centers. DPH began collecting information about adverse events from hospitals in the 1980s. Reporting guidelines have been revised multiple times; DPH adopted the National Quality Forum's (NQF) definitions for adverse events (described on page 7) in 2008. Today, the reporting system is intended to serve as a quality and safety indicator tool, as well as to inform education and practice and foster transparency. Healthcare facilities are required to conduct a root cause analysis and corrective action plan (see page 12 for discussion of these terms), and DPH conducts clinical review and on-site investigation of these data.

The Board of Registration in Medicine (BORIM)'s Safety and Quality Division administers another system that collects reports from facilities. BORIM is the state's licensing authority for physicians. In 1986, as part of malpractice reform and in an effort to create an oversight system for institutions' patient safety programs, the state legislature expanded BORIM's authority to health care institutions where physicians practice medicine. Under this legislation, hospitals and nursing homes were required to develop and share a plan for ensuring patient safety, known as the Patient Care Assessment Program.\textsuperscript{13} They also must report “major incidents” to BORIM. This system requires hospitals, ambulatory surgical centers and ambulatory clinics to submit reports of unexpected serious patient outcomes, known as Safety and Quality Reviews (SQRs).\textsuperscript{14} (Nursing homes are no longer required to report events to BORIM). In addition to SQR reports, facilities submit semi-annual reports to BORIM that include descriptions of patient safety activities and initiatives, the data collected, and responses to trends and patient complaints.

All facility-specific data reported to DPH are in the public domain, whereas all information to BORIM is completely confidential. On average, 60 percent of BORIM reports do not meet the definition of an SRE.

Continued, next page
Reporting Systems in Massachusetts, continued

BORIM leads facility education efforts, highlighting lessons learned and identifying opportunities for improvement, regardless of whether a reported event is preventable. It publishes reports through newsletters and advisories and has convened expert panels and published panel findings. DPH officials acknowledge the inherent tension of being a regulatory entity while also encouraging learning and fostering a safer environment in health care facilities, but continue to spearhead efforts to improve patient safety.

Although the two systems serve different purposes in their reporting of confidential and public information, streamlining, coordinating or potentially consolidating reporting processes across them could help reduce facility burden and strengthen data analysis.

System Reporting Practices

In its 1999 report, the IOM called for a nationwide, mandatory reporting system for state governments to collect standardized information—initially from hospitals but eventually from other health care delivery settings—about adverse medical events resulting in death and serious harm. Since that report, states have made significant progress in standardizing reportable events, improving follow up, and broadening the scope of facilities from which they collect these data.

Facilities that Report Events

In 2014, all 27 reporting systems include event reporting from hospitals. Only six states (California, Georgia, Maryland, Ohio, Rhode Island and Vermont) require reports solely from hospitals. Four other systems (Colorado, the District of Columbia, Massachusetts, and Tennessee) collect reports from all of the following facilities: hospitals, ambulatory surgical centers, long-term care centers, ambulatory clinics and home care providers. Seventeen state systems collect reporting information from other facilities such as abortion clinics, birthing centers, substance abuse or dependency facilities, renal disease facilities, clinical labs or pharmacies (see Appendix). Six states required only hospital reporting in 2007, and only one of those states (New Jersey) had expanded its definition of a reporting facility to include hospitals and ambulatory surgical centers by 2014. Georgia's definition of a reporting facility was broader in 2007 than in 2014, and in addition to hospitals, included end-stage renal disease facilities and clinical laboratories in 2007. The other four states (Maryland, Ohio, Rhode Island and Vermont) continue to require only hospital reporting in 2014. The majority of other state systems include a broader array of providers.

Reportable Events

In 2002, the National Quality Forum (NQF) published Serious Reportable Events in Healthcare: A Consensus Report that provided a recommended list of standardized reportable events it hoped would be used as the basis of a national, state-based reporting system. The list was updated in 2006 and again in 2011, and national entities continue to utilize or adapt the list to shed light on serious reportable events and help prevent their reoccurrence. The 2011 update includes 29 adverse events that are unambiguous, largely preventable, and serious, as well as adverse, indicative of a problem in a healthcare setting's safety systems, or important for public credibility or accountability. The 29 events are organized into seven categories; six relate to the provision of care, such as surgical or invasive procedure, product or device, patient protection, care management, environmental, and radiologic, and the seventh category is for potential criminal events (see text box). Twenty-five of the 29 endorsed events were updated in NQF's 2011 report. States can opt to adopt or adapt the NQF list of events in their reporting systems or develop
# NQF Serious Reportable Events - 2011 Update

## 1. Surgical or Invasive Procedure Events
- Surgery or other invasive procedure performed on the wrong site
- Surgery or other invasive procedure performed on the wrong patient
- Wrong surgical or other invasive procedure performed on a patient
- Unintended retention of a foreign object in a patient after surgery or other invasive procedure
- Intraoperative or immediately postoperative/postprocedure death in an ASA Class 1 patient

## 2. Product or Device Events
- Patient death or serious injury associated with the use of contaminated drugs, devices, or biologics provided by healthcare setting
- Patient death or serious injury associated with the use or function of a device in patient care, in which the device is used or functions other than as intended
- Patient death or serious injury associated with intravascular air embolism that occurs while being cared for in a healthcare setting

## 3. Patient Protection Events
- Discharge or release of a patient/resident of any age, who is unable to make decisions, to other than an authorized person
- Patient death or serious injury associated with patient elopement (disappearance)
- Patient suicide, attempted suicide, or self-harm that results in serious injury, while being cared for in a healthcare setting

## 4. Care Management Events
- Patient death or serious injury associated with a medication error (e.g., errors involving the wrong drug, wrong dose, wrong patient, wrong time, wrong rate, wrong preparation, or wrong route of administration)
- Patient death or serious injury associated with unsafe administration of blood products
- Maternal death or serious injury associated with labor or delivery in a low-risk pregnancy while being cared for in a healthcare setting
- Death or serious injury of a neonate associated with labor or delivery in a low-risk pregnancy
- Patient death or serious injury associated with a fall while being cared for in a healthcare setting
- Any Stage 3, Stage 4, and unstageable pressure ulcers acquired after admission/presentation to a healthcare setting
- Artificial insemination with the wrong donor sperm or wrong egg
- Patient death or serious injury resulting from the irretrievable loss of an irreplaceable biological specimen
- Patient death or serious injury resulting from failure to follow up or communicate laboratory, pathology, or radiology test results

## 5. Environmental Events
- Patient or staff death or serious injury associated with an electric shock in the course of a patient care process in a healthcare setting
- Any incident in which systems designated for oxygen or other gas to be delivered to a patient contains no gas, the wrong gas, or are contaminated by toxic substances
- Patient or staff death or serious injury associated with a burn incurred from any source in the course of a patient care process in a healthcare setting
- Patient death or serious injury associated with the use of physical restraints or bedrails while being cared for in a healthcare setting

## 6. Radiologic Events
- Death or serious injury of a patient or staff associated with the introduction of a metallic object into the MRI area

## 7. Potential Criminal Events
- Any instance of care ordered by or provided by someone impersonating a physician, nurse, pharmacist, or other licensed healthcare provider
- Abduction of a patient/resident of any age
- Sexual abuse/assault on a patient or staff member within or on the grounds of a healthcare setting
- Death or serious injury of a patient or staff member resulting from a physical assault (i.e., battery) that occurs within or on the grounds of a healthcare setting
a state-specific list of events. More than a decade after NQF’s report, 15 states have adopted or adapted the organization’s list of adverse events for their reporting systems.

**NQF Serious Reportable Events - 2011 Update**

As outlined in Figure 2 (below):

- In 2014, eight reporting systems have adopted the NQF list.
- Seven systems use a modified or partial NQF list.
- Twelve reporting systems have a different (non-NQF) list. Eleven use a state-specific list of reportable events, and one state (Ohio) uses the Agency for Healthcare Research and Quality’s (AHRQ) patient safety indicators for its list of reportable events.

**Figure 2: Source of Reportable Event Lists Used in Adverse Event Reporting Systems**

![Map of the United States showing states colored according to their reporting systems]

**Note:** Facilities in Maryland use a state-defined list to report adverse events, however the state uses a modified NQF list to classify events after they are reported.

There has been an increase from 12 to 15 states adopting or adapting the NQF list, which is up from 2007, suggesting more interest in standardization. Since 2007, two of the 12 states (California and Maryland) that previously used the NQF list have moved to a state-specific list. Similar to our 2007 findings, several states report including elements of the NQF list in conjunction with other events. For example, New York uses a partial list of NQF events along with seven state-specific events. Oregon’s voluntary reporting system excludes criminal events and over time has added options for events that were commonly submitted as “other” in the past. The District of Columbia uses 28 NQF serious reportable events as well as central line-associated bloodstream infections in intensive care units as part of the Centers for Disease Control and Prevention (CDC)’s National Healthcare Safety Network.

Most states receive a range from hundreds to thousands of reported events annually due to the differences in reporting standards among states. For example, Pennsylvania, which requires reporting of the broadest range of events—including events that do not cause harm to patients— received hundreds of thousands of reports in 2013. Colorado received 3309 reports in 2013, and New Hampshire received...
51 reports in 2013. The number of reported events may vary based on how reportable events are defined, the number of facilities and beds in the state, the number of procedures performed, and compliance and enforcement of reporting requirements. Therefore the number is not a valid indicator of the actual incidence of events, and many officials believe the numbers are significantly underreported. Providers may fail to report events for a number of reasons, including the fear of publicity or punitive actions, lack of knowledge of the event, or misunderstandings about the reporting system. Despite this reality, system officials use and find reported data to be valuable (see “Data Use” section).

**Reporting Mechanisms**

Technology has evolved over the years, allowing state reporting systems to increasingly become electronic. Fourteen years ago, only one state could receive reports electronically. By 2007, nine states had an electronic system for data collection, analysis and feedback to data reporters. As of 2014, most (22) systems are capable of collecting data electronically. In Utah, facilities enter data into a web-based reporting portal. There are four state systems that collect data manually, and seven accept both manual and electronic data. For example, Washington State facilities report events electronically, but they provide root cause analyses (RCAs, described on page 12) in paper format.

**Data Use**

The use of reported adverse event data varies among states. State agencies hold individual facilities accountable for correcting problems that led to errors; share information about common errors and best practices in prevention across facilities; and inform policy makers, consumers, and other stakeholders about patient safety issues in order to motivate change or guide decision making. Just under half of systems report using data to assess facility-level changes and inform provider or facility education. In order to use data in these ways, states determine whether or not to publicly disseminate reporting system data, and the kind(s) of data and stakeholders with whom to share.

**Public Reporting**

The IOM called for public reporting in state systems and emphasized transparency as one of 10 principles that should guide the redesign of the health care system. Public reporting is one mechanism states can use to disseminate data to drive quality improvements in health care. It can promote learning among both providers and consumers regarding safety risks, and can advance accountability of individual providers and organizations for safety. States can report facility-specific data, or data aggregated across facilities, which allows them to assess the patient safety performance of a facility or the state as a whole. By aggregating data across facilities, states have a greater number of events for analysis and may be able to identify root causes that cannot be pinpointed by an individual facility.

As outlined in Figure 3 (below):

- Sixteen states release only periodic public reports with aggregate data.
- Three states release only periodic public reports with facility-specific information.
- Three states issue both periodic public reports with aggregate data and facility-specific information.
- Five states do not report data to the public.
Figure 3: System Information Sharing with the Public, 2014

Note: Nevada has the authority to publish facility-specific data, but has yet to do so. A draft report is undergoing revision, and therefore remains unpublished.

A similar number of states issue periodic public reports with only aggregate data compared to 2007 (16 compared to 17), however, more states provide only facility-specific data (three compared to zero). Since 2007, fewer facilities report both aggregate and facility-specific data (7 in 2007, 3 in 2014). One state (California) no longer provides facility-specific data. Two states continue to release both types of data (Colorado and Minnesota), while one state (Indiana) went from reporting both in 2007 to only publicly reporting facility-specific information in 2014. Connecticut provided aggregate data in 2007 and in 2014 provided facility-specific information.

As in 2007, Georgia, South Carolina and South Dakota do not publicly report data, but will provide incident-specific information upon request. Only three states (Illinois, New York, and Tennessee) report less frequently in 2014 than they did in 2007. Tennessee presents its data to providers in an aggregate form, but no longer reports publicly as it did in 2007. Illinois also does not report publicly in 2014.

Similar to 2007, most states (16 in 2014 and 14 in 2007) that publicly report data do so on an annual basis. Four state systems publicly report data more frequently—on a weekly, monthly, quarterly or semi-annual schedule. For example, Colorado issues monthly data reports that include both the type of event that occurred and the types of facilities reporting, while also publishing an occurrence summary report online each week. In addition to its annual aggregate report, Oregon has a monthly newsletter that includes a standard “action alert”, which shares important lessons learned from reported information. Trends in reporting data inform the newsletter topics so they are relevant and timely. Oregon also generates one-time reports on special topics that may include data from facilities to provide context.

Eight states report more frequently and with more regularity than they did in 2007. At the time of NASHP’s 2007 report, Florida only publicly reported annually; in 2014 it reported quarterly. Oregon
still reports annually as it did in 2007, and in 2014 provides limited aggregated metrics each month with regard to the quantity and quality of the adverse events reported. Massachusetts reported upon request in 2007 and in 2014, it publicly reports annually. In 2007, Nevada, Vermont and Washington had a goal to report annually; currently Nevada and Vermont do so, and Washington State reports quarterly. California did not publicly report in 2007, New Hampshire’s system did not exist, and Rhode Island’s reports were infrequent, but now all three produce annual public reports. Washington State compiles and posts notifications of events quarterly on its website.

Sharing Information with Facilities

States provide feedback to facilities through a variety of channels including: patient safety webinars to train providers; telephone and Internet-based communication; newsletters and advisories; and periodic in-person meetings.

As of 2014, the majority of state systems share information with providers and facilities (See Figure 4). The information most often takes one of two forms: providers receive aggregated information about events reported to the state, or they are given data that identifies the number of incidents at each hospital or facility that reports to the state.

- Fifteen total systems share aggregate information across facilities.44
- Thirteen state systems share facility-specific incident information with facilities about their incidents.45
- Seven states do not have a feedback loop for sharing information with providers.46

Figure 4: System Information Sharing with Facilities, 2014

Six systems47 provide customized feedback to facilities by phone and the Internet based on the data received. In Oregon, Patient Safety Consultants (PSCs) review submitted reports and provide
individualized feedback via an online reporting tool. Feedback is tailored to the needs of each participant and may include links to quality improvement resources, suggestions for how to improve investigation processes, or support for analyses. In addition, when a report is submitted with unclear or inadequate information, a PSC will often call the reporting contact to ask additional questions, and may provide feedback at that time as well. Utah also clarifies questions through phone conversations. Similarly, in New York, clinical reviewers use phone conversations and electronic messaging systems to provide feedback. In Maryland and the District of Columbia, clinical electronic alerts are shared with providers when warranted by specific events.

Sharing data with facilities presents broader education and training opportunities. New York and the District of Columbia offer periodic webinars and educational sessions on relevant patient safety topics. Tennessee conducts annual trainings for providers. Colorado works directly with facilities to support an effective self-investigation and corrective actions where needed.

Pennsylvania uses de-identified event information in its peer reviewed Pennsylvania Patient Safety Advisory as one vehicle to share event data with facilities, promote learning, and prevent event reoccurrence. The Advisory is a quarterly journal containing articles about actual events that took place in Pennsylvania healthcare facilities. Each article includes clinical guidance about measures facilities can adopt to improve patient safety. Facilities in Pennsylvania are also able to view and analyze all of their reports directly in the state’s system. Aggregate comparison information also is incorporated in annual reports to address facility requests and to further support education.

Two states provide feedback to facilities through committees and meetings. In Connecticut, the conduits are a statewide Quality of Health Care Advisory Committee, a subcommittee on best practices and adverse events, and conversations with the state hospital association. New Hampshire also provides feedback through quarterly provider meetings.

**Review Processes**

States have processes that review adverse event information submitted to them. For example, they may require a facility to conduct its own Root Cause Analysis (RCA), the incident may be subjected to a clinical review, or the state’s reporting authority may perform an on-site investigation.

An RCA is a structured method utilized to analyze serious adverse events to identify deeper underlying systemic problems that increase the likelihood of errors, rather than focusing on mistakes made by individuals. Done well, an RCA can help prevent future recurrences of adverse events by identifying what happened, why it happened, and what steps can be taken to prevent recurrence. This information can help health care providers make internal process improvements and aids the states’ understanding of underlying causes of patient harm to potentially reduce recurrence.

A number of states also require their providers to submit a corrective action plan (CAP) in the aftermath of an adverse event. A CAP is a step-by-step plan of action developed to achieve targeted outcomes for resolution of identified errors. As in 2007, nearly all systems require an RCA, CAP or both. Most systems that require an RCA also require a CAP. Only three systems do not require either an RCA or CAP, which is unchanged from 2007. Since 2007, two systems (California and Kansas) added an RCA or CAP requirement, and one system (District of Columbia) removed its requirement. Ohio is the only system that does not currently and did not previously require an RCA or CAP.

- In 2014, 20 state systems require an RCA, and 19 states require a CAP, with 15 states requiring both an RCA and CAP.
As in 2007, in 2014 most (16) states reported that they conduct clinical reviews, on-site investigations, and in some cases surveillance.

Three systems have provisions related to RCAs or CAPs even though they do not explicitly require them.

RCA mechanisms take a number of different forms across the country. In Indiana, submission of an RCA report is part of the licensing and certification quality assurance requirements rather than the reporting requirements. In the District of Columbia, an RCA is not required but can be submitted to officials for help with analysis and feedback. Colorado also does not require an RCA, but asks facilities to conduct an RCA and include the outcomes as part of their final reports to the state. All occurrence reports in Colorado include an investigation and corrective actions are subject to review during a state on-site survey. In Utah, only the findings of an RCA need to be reported. Patient safety consultants in Oregon review RCAs, identify opportunities for process improvement and provide periodic RCA training and support. Washington requires facilities to submit RCAs, but the state does not review them due to funding losses in 2011.

CAPs also play a role in trying to reduce the overall incidence of patient harm. South Carolina only requires a CAP if the reported incident is determined to need investigation that leads to a citation. In Florida, reports must include a CAP and information about all corrective actions taken. State reporting officials use the information to conduct a review of the incident and determine whether a potential survey of the facility is warranted. In New York, RCAs are required for the most serious events. Rather than submit a separate CAP report for these events, facilities must submit a detailed risk reduction strategy that includes effectiveness measures for monitoring their own adherence to the plan as part of their RCAs. In Oregon, CAPs are called “Action Plans” and each must identify at least one cause, but may include up to five, and indicate the “root” causes. Each cause must have an associated “Action Plan.” In the District of Columbia as with an RCA, if a CAP is submitted, it is analyzed and feedback is provided to the facility.

**Provider Input on Adverse Event Reporting Systems**

The 2014 survey asked states to identify areas where provider feedback informed changes to their reporting systems. Based on provider input, a number of states have revised or created tools to better meet the needs of participants while improving patient safety across the state. Officials from 13 systems indicated using provider feedback to help streamline reporting processes and simplify reporting for facilities.

Minnesota and District of Columbia officials have updated their online systems to improve reporting compliance. South Dakota updated its reporting intake forms and hired an additional staff member to help providers meet their reporting requirements. While New York’s reporting system has always been statewide, program management in 2011 changed from a regional to centralized process; this change has provided a more standardized approach to program management, and provider feedback has been positive. Oregon developed an online reporting system, revised response options in the reporting system, and implemented a program to recognize its leading reporters. Utah is currently revising its system, moving away from an approach focused on sentinel- or most serious- events to a broader patient safety surveillance and improvement program. The new approach requires greater public transparency for accountability and a learning collaborative to improve provider interaction regarding common safety issues.
Implications of Adverse Reporting System in States

Adverse event reporting systems can contribute to quality improvement and delivery system transformation initiatives in states through cross-agency partnerships and collaborations. To better understand these implications, NASHP’s survey asked system officials about the impact of their systems, the integration of systems with other state initiatives, their potential relationships with Patient Safety Organizations, and system funding.

Impact of Adverse Event Reporting Systems

Measuring the impact of an adverse event reporting system is a complicated undertaking. For example, it is hard to quantify events that have been prevented through improved provider education or new initiatives. In addition, a low number of adverse events reported to the state reflects only those that have actually been reported, and is not necessarily indicative of the true scope of these incidents. Despite the limitations of data reported to states, most officials (23) indicated that their systems have fostered communication, guided provider training, enabled internal agency (or facility) tracking or trending of patient safety, and/or brought about greater transparency and awareness of patient safety. States use data analysis, facility or provider surveys, provider or facility training, and more rarely, formal evaluations to understand how their reporting systems affect safety.

Some states gauge the impact of their adverse event reporting systems by analyzing trends and patterns in reported data. These efforts can help a state demonstrate improvements in patient safety and quality of care while at the same time tracking trends of non-compliant facilities and services. Oregon measures system impact in three ways: quantity (whether participants are reporting); quality (whether participants identify the root cause in investigations and system-level prevention strategies in their action plans); and timeliness (whether participants report in a reasonable amount of time of the date of event discovery). Aggregate data and analysis provide insight into areas where participants in Oregon may need additional support, and help guide the development of appropriate tools and resources to address those issues. Similarly, Maryland and the District of Columbia analyze reported data and measure impact by looking at specific trends such as decreases in the number of deaths from falls; Pennsylvania uses system data to support and inform collaborations aimed at reducing significant patient safety events.

Surveys have provided valuable data and insight on the impact of state adverse event reporting systems. Florida measures impact through an annual hospital risk management survey, as well as internal reports for tracking and trending data. The survey, which includes a review of a sample of adverse events, allows Florida to assess facility response for quality improvement purposes. South Dakota also measures impact through a survey process and discussions with facilities.

Other states use their reporting systems to contribute to patient safety education and training. In Maine, officials respond to requests for technical assistance and education from facilities. Massachusetts officials acknowledge the inherent tension of being a regulatory entity while also encouraging learning and fostering a safer environment in health care facilities, but continue to spearhead efforts to improve patient safety. Pennsylvania communicates information to facilities through its Pennsylvania Patient Safety Advisory and other modalities, and develops statewide trainings on patient safety topics for thousands of providers in the state. In Maryland, hospitals have changed practices after receiving clinical alerts from the state about adverse events.

Perhaps due to limited resources and staffing, only three states have pursued formal evaluations of their reporting systems; two include surveys. Pennsylvania surveys hospital facilities each year on the ease of system use; the survey also inquires as to whether facilities have taken actions based on articles published in the Pennsylvania Patient Safety Advisory. Pennsylvania uses this information to make reporting system
changes and includes the information in its annual public reports. Results of an evaluation survey in Minnesota (see text box) demonstrated heightened awareness of patient safety in facilities and a feeling of increased safety among providers compared to ten years ago. California is in the process of conducting an evaluation of its reporting system, with results expected in 2015.

**Minnesota’s 10-Year Evaluation**

In its *Adverse Health Events: 10 Year Program Evaluation*, the Minnesota Department of Health summarizes trends, key lessons and next steps for improvement identified through focus groups, a reporting facility survey and analysis of 10 years of reporting system data. Having conducted a five-year evaluation in 2008, the state was able to compare findings across time. Among the findings:

- The number of deaths from reportable adverse events varied from year to year but decreased overall from 2004 to 2013.
- Events resulting in serious disability declined slowly, but steadily.
- Rates of reported events overall remained consistent over the 10 years.
- Hospitals and surgical centers shared that the reporting system “works well” and wanted to see a similar “commitment to transparency, learning and public reporting” in all care settings.
- The percent of surveyed reporting facilities reporting feeling their facility was “significantly safer” was four times higher in 2013 than in 2008.
- Specific campaigns (e.g., focused on retained foreign objects) have resulted in declines in reports for those events.
- Eighty percent of facilities reported using shared learnings about adverse events in their facilities.
- The time between the occurrence and discovery of an event steadily decreased over the 10 years, and facilities submit more robust data compared to 2004.

Overall, nine states reported increased provider and facility awareness of patient safety, which can lead to the identification of causal factors associated with adverse events, and ultimately, to an opportunity for patient safety improvement. Utah and Maine specifically noted that their reporting systems have raised facility awareness of adverse events and helped foster facility trust, resulting in regular communication and an increased willingness among facilities to disclose adverse events. Five states noted that the requirement to report to a system has facilitated internal data tracking and trending by the state or facilities. Minnesota and New Hampshire indicated increased transparency as a result of their systems; five other states reported that their systems have helped guide facilities in identifying or implementing improvement strategies centered on safety.

**Integration with Other State Initiatives**

To help understand the potential implications of adverse event reporting systems for statewide initiatives, NASHP asked states to identify how their reporting systems align with other patient safety, quality improvement, and delivery system transformation initiatives within their states. Adverse event reporting often overlaps with other patient safety efforts (including initiatives led by Patient Safety Organizations,
described in the next section), making partnerships and collaboration across agencies and with other organizations an important strategy for improving patient safety. At the same time, specific examples of collaboration or integration that demonstrate the importance of patient safety as part of quality improvement or delivery system transformation initiatives are rare.

Oregon tries to align its definitions with national agencies like AHRQ (i.e. Common Formats) and the CDC’s National Healthcare Safety Network. This is designed to improve coordination with other state public health priorities, such as mandatory infection reporting to the Oregon Department of Public Health, as well as various quality assurance and performance improvement and accreditation programs. By aligning definitions with other state efforts, Oregon aims to decrease the reporting burden on facilities and help them coordinate quality improvement efforts that target some of the same goals or metrics (e.g., falls prevention). In New York, adverse event data are shared within the health department, notably with radiation protections, infectious disease and maternal mortality reduction programs.

The reporting system in Pennsylvania supports numerous collaborations across the state, including the Partnership for Patients Hospital Engagement Networks. Reporting system officials in Maryland work with the Maryland Patient Safety Center on conferences and collaboratives such as the Maryland Hospital Hand Hygiene Collaborative and the SAFE from FALLS Initiative. They also work across state agencies with the Maryland Health Services Cost Review Commission and the Maryland Health Care Commission on other quality initiatives.

In Indiana, the reporting system is integrated into the health care facility licensing and Medicare/Medicaid certification program. Similarly, California incorporates its adverse events, patient safety licensing activities and medication error reduction surveys into one comprehensive licensing survey. Aggregate patient safety data are integrated into hospital community report cards in Vermont.

Nonpayment policies, community health reports, and similar activities are often part of broad state or federally-led health care system transformation efforts to improve quality, lower costs and improve health. Initiatives such as the State Innovation Model (SIM) and Delivery System Reform Incentive Payment programs are much broader than patient safety but present concrete opportunities to link quality and safety. However, despite potential opportunities, most survey respondents did not explicitly indicate if or how their states had integrated patient safety into these or other specific health care transformation efforts. A few respondents noted that their reporting system goals are in alignment with broad patient safety or quality improvement initiatives, but did not indicate how their states specifically aligned the efforts. In other words, despite complementary goals, adverse event reporting systems overall seem to stand alone from states’ broad quality improvement, cost containment, and other delivery system reforms.

**Patient Safety Organization Reporting Relationships and Requirements**

In response to the IOM’s 1999 report, Congress developed and enacted the Patient Safety and Quality Improvement Act of 2005 (the Act). The Act offered certain privilege and confidentiality protections for providers who work with federally-listed Patient Safety Organizations (PSOs), and was intended to promote shared learning to enhance quality and safety nationally. The final Patient Safety Rule was adopted November 2008 and became effective in January 2009. The Affordable Care Act (ACA) brought additional changes by requiring hospitals with more than 50 beds wanting to contract with Qualified Health Plans in health insurance marketplaces to work with PSOs. In March 2014, CMS adopted a proposal that does not require hospitals to work with PSOs until at least 2017.
As a result of these upcoming PSO reporting relationships and requirements, a few states are considering changes to their reporting systems. New York is exploring formats such as those established by AHRQ’s Common Formats to improve the collection of standardized information to more easily share data with researchers and providers. Connecticut, the District of Columbia, and Indiana are also reviewing reporting requirements and evaluating potential changes to their systems. However, most states do not plan to make any changes.\(^{76}\)

**System Funding**

Officials draw from a variety of funding sources to operate their reporting systems (see Figure 5). Similar to 2007 findings, the majority of systems are funded through agency general operating funds, but several states are also supported through facility assessment and licensing fees and dedicated state funding streams. While the number of states receiving funding in each of these categories has remained fairly consistent over the seven years since the last survey, the mix of states in each category has changed.

**Figure 5: Funding Sources for Adverse Event Reporting Systems, June 2014**

- In 2014, 17 states have the same funding source as in 2007.\(^{77}\)
- Fifteen systems use agency general operating funds to finance their reporting system operations.\(^{78}\) Two of these (the District of Columbia and Maine) did not use general operating funds in 2007, and one system (New Hampshire) did not exist in 2007.
- Seven states are supported by some kind of facility assessment or licensing fee.\(^{79}\) One of these states (Illinois) received funding from different sources in 2007.
- Seven states have a dedicated state-funding stream.\(^{80}\) Five of these states were not financed through a dedicated state-funding stream in 2007.\(^{81}\)
- One state (Tennessee) receives a combination of federal and state funding support.
Of the state systems supported by dedicated state funds in 2007, one system (Illinois) is currently supported by facility assessment or licensing fees, and one system (Maine) receives agency general operating funds. Washington State’s general state funding for its system was eliminated in 2011 with a small percentage of resources absorbed to maintain basic operations of the program and receive process notifications of adverse events.
CONCLUSION

Recent survey results demonstrate continued state commitment to tracking adverse events and using reported data to improve patient safety. Although the IOM call for a national system of mandatory reporting has not been realized, just over half of states have an adverse event reporting system, for a total of 27 adverse event reporting systems in 26 states and the District of Columbia. Since 2007, one system ended (Wyoming), and one system was established (New Hampshire), and one additional system (Texas) will be live in January 2015. After seeing a significant increase in the number of state adverse event reporting systems between 2000 and 2007, there has been limited growth since then. Several states have modified their systems since 2007 or are in the process of identifying or implementing changes.

Some of our key findings about state adverse event reporting systems include:

- Twenty-six states and the District of Columbia have reporting systems to monitor occurrence of adverse medical events, a number that has not changed significantly since NASHP’s 2007 survey. Momentum to establish a nationwide, mandatory reporting system for state governments to collect standardized information about adverse events—fueled by the seminal IOM report, To Err is Human, in 1999—has stalled.

- There continues to be wide variation in the number and types of individual events reported to states each year, but there has been a slight increase in the number of states adopting or adapting the NQF list, suggesting more interest in standardization.

- Reporting systems are more advanced than they were in 2007, with the majority of state systems now using electronic reporting. This suggests recognition of the need to improve data collection and analysis systems and reduce administrative burden.

- Most states prioritize communication of findings to providers and the public, and several states have increased the frequency of public reporting, suggesting that states are promoting learning among both providers and consumers regarding safety risks, and are working to advance accountability of individual providers and organizations for safety.

- Drawing from anecdotal experience with facilities, provider surveys, and in one case, a formal evaluation, nearly all states indicate their reporting systems have had a positive impact. Officials report their systems have: raised awareness about patient safety; fostered a culture of trust and transparency; improved communication among facilities; guided provider education; assisted facilities and providers in addressing patient safety issues; and/or enabled states to track and trend patient safety needs.

- System officials report partnering effectively in their states to address patient safety issues. Nevertheless, the statewide profile or use of adverse event reporting systems does not appear to have changed significantly as part of health care or delivery system reform.

Adverse event reporting often intersects with other patient safety efforts, making partnership and collaboration across agencies and organizations an effective way to improve patient safety. With a focus on promoting high-quality, cost-effective care that improves patient health and experience, state health care delivery system reform initiatives provide an opportunity for patient safety officials to partner with other state officials in Medicaid and public health agencies, as well as other organizations working on patient safety issues. Given the extent of state activity in delivery and patient reform, there are few
specific examples of states drawing from adverse event reporting system data as part of statewide improvement efforts. Through broader and even more collaborative relationships, states have the potential to leverage reporting system data in new ways to advance patient safety and help achieve the Triple Aim of better care, better health, and lower costs.

Overall, there continues to be state interest in and attention to patient safety, as well as a range of experiences from which states can learn as they address patient safety; yet there is room for states to further explore and integrate adverse event reporting systems and patient safety more broadly into statewide delivery reform or quality improvement initiatives.
### Appendix: Types of Facilities Required to Report Adverse Events in 2014*

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<tr>
<th>System</th>
<th>Hospitals</th>
<th>Ambulatory Surgical Centers</th>
<th>Long Term Care Centers</th>
<th>Ambulatory Clinics</th>
<th>Home-care Providers</th>
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*Hospitals include general, acute care, acute psychiatric and special hospitals (A special hospital has organized medical or dental staff that provide inpatient/outpatient care in dentistry and maternity).

All licensed healthcare facilities, including assisted living, hospice, birth centers, emergency centers, community clinics, acute treatment units, homes for the intellectually and developmentally disabled.

Hospice, assisted reproductive centers, chronic disease and psychiatric hospitals, birth centers.

Nursing facilities, comprehensive outpatient rehabilitation facilities, home health agencies, hospice programs, renal dialysis facilities, pharmacies, physician or health care practitioner offices, behavioral health residential treatment facilities, health clinics, clinical laboratories, health centers.

Nursing homes, assisted living facilities and certain health maintenance organizations (HMOs) providing direct services.

End-stage renal disease facilities, clinical laboratories.

Abortion clinics, birthing centers.

Intermediate care facilities for individuals with intellectual disabilities.

End stage renal disease facilities, Intermediate care facilities for individuals with intellectual disabilities.

Obstetric centers and independent centers for emergency medical care.
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<th>System</th>
<th>Hospitals</th>
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<th>Long Term Care Centers</th>
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Licensed hospitals, licensed diagnostic and treatment centers including but not limited to those providing primary care and hemodialysis

Birthing centers, abortion facilities, nursing homes, long-term acute care and rehab facilities

In-home care providers, community residential care facilities, facilities that treat individuals for psychoactive substance abuse or dependence, freestanding mobile technology, habilitation centers for persons with intellectual disability or related conditions, hospice, renal dialysis facilities, residential treatment facilities for children and adolescents

Adult foster care, alternate level of care, inpatient chemical dependency treatment facilities, inpatient hospice facilities

End stage renal disease facilities, residential homes for the aged, assisted care living facilities, hospice

Other licensed facilities including skilled nursing care and dialysis centers will be included soon

Department of Corrections health facilities, birthing centers, psychiatric hospitals

* Oregon's reporting system is not a mandatory program, so facilities are not required to report. Hospitals, ambulatory surgical centers, long term care centers, and pharmacies submit reports. Renal dialysis facilities and freestanding birthing centers are also eligible to submit reports, but there have never been active reporting programs available for those segments.

**Ambulatory surgical centers and ambulatory clinics are required to report to the Medical Board on Adverse Events rather than the department that runs California's adverse event reporting system.

***Refers to the Massachusetts Department of Public Health's system
ENDNOTES


5. An adverse event is an injury resulting from a medical intervention (not due to the underlying medical condition of the patient) and preventable adverse events are those that are attributable to a medical error.


7. The reporting system in Oregon is administered through the Oregon Patient Safety Commission, a semi-independent state agency charged by the Oregon Legislature with reducing the risk of serious adverse events occurring in Oregon’s healthcare system and encouraging a culture of patient safety. Reports from facilities are confidential and non-discoverable. Pennsylvania’s reporting system is administered through the Pennsylvania Patient Safety Authority, which was established under Act 13* of 2002, the Medical Care Availability and Reduction of Error (“Mcare”) Act, as an independent state agency. The Authority’s role is non-regulatory and non-punitive.

8. Massachusetts has two mandatory reporting systems. While reporting officials from both systems completed the survey, this report, with the exception of the text box on page 5, reflects only the system administered by the Department of Public Health, not the system administered by the Board of Registration in Medicine.


10. Although Oregon’s adverse event reporting system is voluntary, once a facility signs an agreement to participate, it commits to submitting reports.

11. To better understand the systems, NASHP asked an official from each system to complete our survey and subsequently interviewed stakeholders representing these and other entities in the state. Information from those interviews and survey responses is synthesized here.

12. To ensure that all patients are protected from injury while receiving care, NQF has developed and endorsed a set of Serious Reportable Events (SREs). This set is a compilation of serious, largely preventable, and harmful clinical events, designed to help the healthcare field assess, measure, and report performance in providing safe care.

There are four types of events that must be reported. The first three types of events are specific outcomes: (1) maternal death related to delivery; (2) death during or resulting from an elective ambulatory procedure; and (3) a wrong site procedure. The fourth type involves a death or “major or permanent impairment of bodily function” that was not ordinarily expected, based on the patient’s condition upon presentation or admission to the facility. (243 CMR 3.08: http://www.mass.gov/eohhs/docs/borim/reg-243-cmr-3.pdf).

An adverse event is an injury resulting from a medical intervention (not due to the underlying medical condition of the patient) and preventable adverse events are those that are attributable to a medical error.


Ibid.

Ibid.


Indiana, Massachusetts, Minnesota, Nevada, New Hampshire, Utah, Vermont, and Washington.


California, Colorado, Florida, Georgia, Kansas, Maryland, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee and South Dakota. In Pennsylvania, facilities report both harm and non-harm events, and submit any reportable event in one of 217 separate categories.

In Maryland, regulations have always required a certain state defined set of required adverse events that must be reported. However, the state uses a modified version of the NQF list for how it classifies events it receives.

For more information, visit http://www.cdc.gov/nhsn/.


For more information, visit http://www.nashp.org/sites/default/files/use_of_adverse_data.pdf.


Georgia, Kansas, Maryland and South Dakota.


Connecticut, Indiana and Massachusetts.

Colorado, Minnesota, and New Hampshire.

Georgia, Illinois, South Carolina, South Dakota, and Tennessee.

California, Connecticut, District of Columbia, Indiana, Kansas, Maine, Maryland, Massachusetts, Minnesota, Nevada, New Hampshire, New Jersey, Oregon, Rhode Island, Utah and Vermont.

Colorado, Florida, Ohio, and Washington.

California, Florida, Massachusetts, Nevada, Oregon, Rhode Island, Vermont, and Washington.


Georgia, Illinois, Indiana, Kansas, Rhode Island, South Carolina, and South Dakota.

Colorado, the District of Columbia, New York, Oregon, Utah and Vermont.

The electronic messaging system is a feature in the secure electronic NYPORTS system allowing communication between a specific facility and the New York Department of Health. This communication may involve providing feedback to a facility, seeking additional information or clarification regarding an event. Both the Department of Health and the facility have the ability to initiate communication.


In 2007 Wyoming also did not require an RCA or CAP, but the system no longer exists.


NASHP’s 2007 survey did not ask states to identify areas in which provider feedback might have informed changes to their reporting systems.

Colorado, the District of Columbia, Florida, Indiana, Maine, Maryland, New Jersey, Oregon, Minnesota, Nevada, Pennsylvania, South Dakota, and Vermont.


California, Connecticut, Indiana, Maine, Minnesota, New Hampshire, New Jersey, New York and Utah all made specific mention of increased transparency, trust and awareness among providers and facilities.

Florida, Georgia, New Jersey, South Carolina, South Dakota.

Colorado, Maryland, Oregon, Pennsylvania, and Washington.

Patient Safety Organizations (PSOs) are required to collect and analyze data in a standardized manner. AHRQ created the Common Formats (common definitions and reporting formats) to help providers uniformly report patient safety events and to improve health care providers’ efforts to eliminate harm. The Formats are broadly divided into two categories: generic ones that apply to all patient safety events and event-specific ones that relate to certain high-frequency event types. Accessed on September 30, 2014 from https://www.pso.ahrq.gov/common.

Hospital Engagement Networks (HENs) work at the regional, State, national or hospital system level to help identify solutions already working and disseminate them to other hospitals and providers: http://partnershipforpatients.cms.gov/about-the-partnership/hospital-engagement-networks/thehospitalengagementnetworks.html.

The Maryland Patient Safety Center is a Patient Safety Organization in Maryland that was established in 2003 by the Maryland Legislature.
67 The Maryland Hand Hygiene Collaborative is a statewide initiative to enhance the prevention of healthcare-associated infections in Maryland hospitals. The goal of the Collaborative is to achieve a better than 90 percent hand hygiene compliance rate among Maryland acute care hospitals. Being led by the Maryland Patient Safety Center, the Collaborative enjoys working relationships with the Maryland Department of Health and Mental Hygiene, Maryland Health Care Commission, Maryland Health Quality and Cost Council and the Delmarva Foundation. Accessed on September 30, 2014 from http://www.marylandpatientsafety.org/HandHyginecollaborative.aspx.

68 This collaborative supports and coordinates communications and outreach through a statewide initiative in order to assist in the reduction of both incidence and severity of patient falls in all healthcare settings in Maryland. Currently, there are 90 facilities participating-including acute care hospitals, long-term care facilities and home health agencies. The initiative has contributed greatly to preventing over 960 falls with a corresponding cost savings estimated at over $6.2 million. Accessed on September 30, 2014 from http://www.marylandpatientsafety.org/SafefromFallsinitiative.aspx.

69 In 2003, the Vermont Legislature passed Act 53, “An Act Relating to Hospital and Health Care System Accountability, Capital Spending, and Annual Budgets.” One of the requirements of Act 53 is that Vermont hospitals publish annual hospital community reports containing information about quality, financial health, costs for services, and other hospital characteristics. The law also requires the Department of Banking, Insurance, Securities and Health Care Administration to publish some of that same information in a comparative format on this website. Accessed on September 30, 2014 from http://www.dfr.vermont.gov/health-care/hospitals-health-care-practitioners/hospital-report-cards.


73 NASHP conducted stakeholder interviews in select states to produce case studies that will be published separately from this report, but provide additional information about patient safety within the context of delivery system reform.

74 A PSO is an entity listed by AHRQ that meets certain criteria established in the Patient Safety Rule. The primary activity of a PSO must be to conduct activities to improve patient safety and health care quality. Additionally, a PSO’s workforce must have expertise in analyzing patient safety events, such as the identification, analysis, prevention, and reduction or elimination of the risks and hazards associated with the delivery of patient care. (AHRQ Frequently Asked Questions. Accessed on October 2, 2014 from: https://www.pso.ahrq.gov/faq#WhatisaPSO).

Several states are not making any changes to their reporting system as a result of upcoming PSO reporting relationships and requirements. They are as follows: Colorado, Florida, Georgia, Illinois, Kansas, Maine, Maryland, Massachusetts, Minnesota, New Hampshire, Nevada, New Jersey, Ohio, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Utah, Vermont, and Washington.

Connecticut, Florida, Georgia, Indiana, Maryland, New Jersey, Ohio, South Carolina, South Dakota, and Washington continue to use agency general operating funds to finance their reporting systems. California, Colorado, Minnesota, Oregon, and Pennsylvania continue to use facility assessment or licensing fees to finance their reporting system. Nevada and New York continue to use state funds to finance their reporting system.


California, Colorado, Illinois, Minnesota, Oregon, Pennsylvania, and Vermont. Seven states (California, Colorado, the District of Columbia, Minnesota, Oregon, Pennsylvania and Vermont) received support via this mechanism in 2007.

Kansas, Massachusetts, Nevada, New York, Rhode Island, Tennessee, and Vermont.

Kansas, Massachusetts, Rhode Island, Tennessee, and Vermont did not receive dedicated state funds to finance their reporting system in 2007.

One state system (Wyoming) that was supported through state funds in 2007, no longer exists in 2014.