
Cost Implications of State Medical Error Reporting Programs: *A Briefing Paper*

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EXECUTIVE SUMMARY

When the Institute of Medicine released its report *To Err is Human* in 1999, public attention was drawn to the significant problem of medical errors in the United States' healthcare system. With as many as 98,000 people dying each year as a result of errors in hospitals alone, medical error ranks as a leading killer of Americans.

Among its recommendations to address the problem, the Institute of Medicine report called for all states to develop mandatory reporting systems to collect information about adverse events that lead to serious injury or death. As a result, states and other stakeholders are looking for information about the state programs that currently exist and how those programs operate.

Many states are considering whether, and how, to implement mandatory reporting systems. In so doing, state leaders have identified barriers to developing such systems, including financial, political, and legal barriers as well as lack of models and lack of evidence of impact. This paper describes some of these barriers and examines the costs of designing, implementing, and maintaining mandatory reporting programs in two states. Florida and New York reporting programs were chosen for this cost analysis because the programs are mature and have clearly delineated components.

In reviewing the costs associated with the Florida and New York programs, the National Academy for State Health Policy (NASHP) identified cost components that are useful to consider in developing reporting programs and determining relative costs based on varying design assumptions. The cost components that were identified are information system design or acquisition; data collection and entry; desk review; investigation; validation; analysis; training, information sharing, and education; and administration. This report analyzes each component of the Florida and New York programs, the functions performed, known cost considerations, and, where available, actual costs. Costs vary considerably between the two programs; the reasons for variations are described for each component.

As the results demonstrate, the costs of operating a reporting program will be influenced by a variety of factors, including the goals of the program, the current state infrastructure, the ability to leverage existing resources, and dependence on outside consultants. Opportunities for leveraging existing resources may be most available for administrative and investigative functions. Costs of information system development, data analysis, and program evaluation should be considered separately from other implementation costs since these costs are most likely to require additional resources. The process of designing and implementing a reporting system was found to provide an opportunity to enhance the effectiveness of quality oversight programs.

The experiences of Florida and New York demonstrate that marginal costs for operating the reporting programs may be less than expected; however, both programs also cited a need for additional resources to maximize the usefulness of the information collected. The resulting analysis can be used by other states to assess their options and strategies for creating mandatory reporting systems and simultaneously enhancing their quality oversight functions.

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INTRODUCTION

The primary purpose of this paper is to examine the costs of designing and implementing a state-based mandatory reporting system for adverse events that occur within hospitals. Growing awareness of medical errors and avoidable hospital deaths raises the stakes for state governments to take more active roles in protecting patient safety. An obvious starting point for states is to require hospitals to report these events so that appropriate investigation and action can be taken to avoid their reoccurrence. This paper explores the costs of and other barriers to creating mandatory reporting programs.

The paper begins with a brief review of the Institute of Medicine's study on medical errors and its recommendations regarding the role of states in addressing the issue. This is followed by a summary of existing state mandatory reporting programs as well as barriers perceived by states without reporting programs. A description of the two states whose programs were studied for this paper is then presented, including an analysis of how variations in program features impact cost. The paper closes with lessons learned and final conclusions.

PATIENT SAFETY AND THE ROLE OF STATES

Medical Errors and Patient Safety

According to the Institute of Medicine report *To Err is Human*, at least 44,000 Americans (and maybe as many as 98,000) die each year in hospitals as a result of medical errors, making medical errors a leading cause of death in the United States. More Americans die as a result of medical errors than from automobile crashes, AIDS, or breast cancer.¹ However, this number represents only the tip of the iceberg, in that it does not account for the deaths that occur in settings other than hospitals. It also fails to account for the number of people who are injured, but do not die, as a result of medical errors.

Medical error and related terms are defined below, according to the Institute of Medicine report:

- adverse event: a serious injury or death resulting from medical management, not the underlying condition of the patient.
- medical error: the failure of a planned action to be completed as intended, or use of the wrong plan to achieve an aim.
- preventable adverse event: an adverse event attributable to error.
- patient safety: freedom from accidental injury.²

As the report indicated, most errors are the result of multiple contributing factors as opposed to single events or bad people. Blaming individuals will not solve the problem; preventing errors and improving patient safety requires modification of the underlying factors that lead to errors. Often referred to as latent factors or system failures, these underlying factors (such as problems with equipment or technology; poor orientation, training, and communication among staff; and poorly structured organizations) pose the greatest threat to safety.³

Many stakeholders are concerned about patient safety, and responsibility is spread across the federal government, state governments, and private and public providers. As a result, many stakeholders are responding by developing strategies to identify and address threats to patient safety. State governments can address the problem in a variety of roles, as purchasers, providers, and regulators, among others. States regulate private health insurance, purchase significant amounts of health care, and assume responsibility for protecting the public's health and safety. State regulators are responsible for holding

¹ Institute of Medicine, *To Err is Human: Building a Safer Health Care System* (Washington, D.C.: National Academy Press, 1999), 1 (paperback edition).

² Institute of Medicine, *To Err is Human: Building a Safer Health Care System* (Washington, D.C.: National Academy Press, 1999), 3-4 (paperback edition).

³ Institute of Medicine, *To Err is Human: Building a Safer Health Care System* (Washington, D.C.: National Academy Press, 1999), 56 (paperback edition).

healthcare providers accountable for safety and have the unique role of licensing healthcare facilities and professionals. The problem is unlikely to disappear without serious attention from state governments as well as other stakeholders.

The Case for Mandatory Reporting

Institute of Medicine recommendation

The authors of the Institute of Medicine report called for a 50 percent reduction in deaths due to medical errors within the next five years and outlined a four-tiered approach to error reduction: establishing a national focus to create leadership, research, tools, and protocols to enhance knowledge about safety; identifying and learning from errors through mandatory and voluntary reporting efforts; raising standards and expectations for safety improvements through actions of oversight agencies, group purchasers, and professional groups; and implementing safety practices at the delivery level.⁴

In addressing reporting systems, the Institute of Medicine recommends the development of external reporting systems to enhance understanding about errors and the underlying factors that contribute to them. A nationwide mandatory reporting system is recommended in which states collect standardized information about adverse events that result in death or serious harm.⁵

Potential benefits of mandatory reporting

As envisioned, mandatory reporting systems would be used to hold healthcare facilities accountable for safety. Implementation of such systems would protect the public by assuring that errors are reported and responded to and would induce providers to invest in, and thus improve, patient safety. Documentation of adverse events may highlight weaknesses in systems. Some reporting proponents have argued that state government should be aware of serious preventable injuries that occur within healthcare facilities because single incidents may indicate that facility error prevention mechanisms are not working effectively and warrant an immediate response.

The public expects state governments to provide oversight of healthcare facilities. According to a national survey conducted by the Kaiser Family Foundation and the Agency for Healthcare Research and Quality (AHRQ), almost three-quarters of those surveyed believe the government should require healthcare

⁴ Institute of Medicine, *To Err is Human: Building a Safer Health Care System* (Washington, D.C.: National Academy Press, 1999), 5 (paperback edition).

⁵ Institute of Medicine, *To Err is Human: Building a Safer Health Care System* (Washington, D.C.: National Academy Press, 1999), 7 (paperback edition).

providers to report all serious medical errors.⁶ Thus mandatory reporting programs may help states address consumer expectations in addition to fulfilling an important oversight role.

⁶ The Henry J. Kaiser Family Foundation and the Agency for Healthcare Research and Quality, *National Survey on Americans as Health Care Consumers: An Update on the Role of Quality Information* (December 2000).

STATE POLICY PERSPECTIVE ON MANDATORY REPORTING

Current State Approaches to Reporting

According to a survey conducted by the NASHP, fifteen states reported having mandatory reporting programs.⁷ The programs were established prior to the Institute of Medicine report in response to:

- **A crisis in the availability of medical malpractice insurance:** In the mid-1970s and again in the mid-1980s, insurance companies and physicians pressured state legislatures to reform medical malpractice laws to curtail frivolous lawsuits, excessive damage awards, and malpractice insurance costs. In exchange for legal reforms, states imposed heightened oversight of physician and hospital quality, including, in some cases, mandatory incident reporting requirements.
- **A highly publicized tragic event:** Several states established reporting requirements after mistakes in the delivery of patient care resulted in highly publicized events.
- **Initiatives to increase oversight of the quality of hospital care:** For some states, mandatory reporting acts as an important adjunct to their quality oversight systems by identifying issues, in real time, that negatively impact the quality of patient care.

Historically, mandatory reporting programs have focused on individual incidents and have been used by states as a way to identify and investigate single events as close as possible to the time of their occurrence. Most current reporting programs were designed to address serious adverse events, yet they also capture the medical errors that have resulted in these events. With the publication of the Institute of Medicine report, states with existing programs have begun to examine whether and how their programs can more fully address patient safety issues. Activities undertaken by states include:

- Validating that required incidents are being reported. States use a variety of methods to check the accuracy and completeness of incident reports, including checking whether incidents are reported accurately by comparing the report against complaints and hospital discharge data and by conducting random on-site chart reviews. These efforts aim to increase confidence in data generated from reporting programs and the use of that data to track trends over time.
- Enhancing the efforts of hospitals to conduct analyses of the root cause of adverse events so that they can be prevented in the future.
- Issuing public reports to increase awareness within the provider and consumer communities regarding the number and types of incidents reported.

⁷ Findings from this survey are reported in *State Reporting of Medical Errors and Adverse Events: Results of a 50-State Survey*, National Academy for State Health Policy, April 2000.

- Convening provider and/or consumer groups to consider strategies for addressing patient safety problems to reduce their reoccurrence.

State reporting program officials are unable to determine the impact of their reporting requirements on reducing medical errors since the programs generally have not been used for this purpose until recently. However, state officials do believe that these programs add value to, and provide a critical avenue for, their healthcare facility oversight activities. States believe that, if fully executed, their programs will lead to a reduction in medical errors by routinely collecting, analyzing, and working with facilities to remedy identified problems.

State Barriers to Developing Reporting Programs

Having concentrated on states that have reporting programs, NASHP then expanded its focus to identify the challenges that states without reporting programs face in developing them. NASHP conducted phone interviews with state leaders in seven states (Alabama, Iowa, Maine, Minnesota, Missouri, Virginia, and Washington, D.C.). Six of the states were chosen because, although they do not have mandatory reporting programs, they are actively involved in exploring opportunities to address patient safety issues through activities such as joining coalitions with providers, conducting patient safety studies, attempting to address workforce issues, and reviewing current state risk management and data collection requirements. The seventh state was chosen because it has a policy that requires reporting of unusual incidents, but compliance with the policy is minimal, and the state has not identified a need for improved reporting through an accompanying statute or regulation.

Given the Institute of Medicine recommendation and pressure on states to respond, many states are considering whether, and how, to implement mandatory reporting systems. Many state contacts believe that, if well designed, a reporting system would be a potentially useful tool to strengthen their oversight function and would help them work toward safeguarding the public and improving quality of patient care. However, they face barriers to developing such systems:

- **Financial barriers:** States face tightening state budgets, including constraints in current healthcare facility oversight activities. States express concern about developing and implementing new programs without having resources to use the information collected effectively. State efforts are further stymied by lack of available cost estimates to design and operate systems. Many look to the federal government for funding, as recommended in the Institute of Medicine report.
- **Political barriers:** States face opposition to mandatory reporting from healthcare associations that are well represented and organized. Opposition often stems from concerns about confidentiality of data. Some states do not want to jeopardize collaborative relationships with providers by implementing reporting systems. States are also hesitant to move forward and implement programs for fear that future federally imposed requirements or standards that result from the Health Insurance Portability and Accountability Act (HIPAA) would not match their programs. Others feel that competing priorities are more important.

- **Legal barriers:** There is considerable concern among hospitals and their professional associations about the confidentiality and disclosure of data collected under mandatory reporting programs. States want to proceed cautiously and with expert guidance on how to design their programs so as to limit potential liability while preserving the overall intent of the system.
- **Lack of models and evidence of impact:** There is wide variability among existing mandatory reporting programs in the types of data they collect. No conclusive evidence exists about which, if any, program features impact patient safety or whether reporting programs in general are one of the most effective approaches for addressing the problem. Although recognizing the role of reporting programs in holding hospitals accountable, some states question their effectiveness in reducing errors. Some states prefer to wait until evidence of impact in reducing errors is available before deciding to implement reporting programs.

States are looking for resources that address the above barriers. NASHP has focused on many of them in recent publications. In its report on site visits to states with existing reporting programs, system features are described and assessed with respect to feedback from reporting program officials, hospitals, consumers, and other stakeholders.⁸ While the purpose of that paper was not to define a single best-practice model, it does provide a useful comparative analysis of the scope and features of existing programs. A second NASHP paper provides a detailed account of the legal issues and their implications for mandatory reporting systems.⁹ This supplements a third paper that outlines relevant legislation introduced by states during the past year on patient safety-related matters.¹⁰

States need additional assistance in addressing other identified barriers to operating reporting programs. AHRQ's recently-released Request for Applications, *Health System Error Reporting, Analysis, and Safety Improvement Demonstrations*, will assist in evaluating reporting programs and addressing some of the information needs expressed by states. The National Quality Forum (NQF) has been charged with establishing and maintaining a core set of reporting standards that, if used by states, will help address standardization concerns. NASHP plans to build on earlier work to identify reporting policy options and models that states can use and to continue to track legislation introduced in states that addresses patient safety issues, which may help states consider political implications of introducing reporting requirements.

⁸ Jill Rosenthal et al., *Current State Programs Addressing Medical Errors: An Analysis of Mandatory Reporting and Other Initiatives* (Portland, ME: National Academy for State Health Policy, 2001).

⁹ Lynda Flowers and Trish Riley, *State-based Mandatory Reporting of Medical Errors: An Analysis of the Legal and Policy Issues* (Portland, ME: National Academy for State Health Policy, 2001).

¹⁰ Lynda Flowers and Trish Riley, *How States are Responding to Medical Errors: An Analysis of Recent State Legislative Proposals* (Portland, ME: National Academy for State Health Policy, 2000).

OVERVIEW OF FLORIDA AND NEW YORK REPORTING PROGRAMS

Two states, Florida and New York, were selected for detailed cost analysis because they represent mature programs with substantial experience and clearly delineated components. One-day site visits were conducted with reporting program officials in each state to review staffing levels, equipment and material resources, and other costs associated with operating their reporting programs. Both development and maintenance costs were considered.

Florida and New York have very different approaches to constructing a reporting program, each with very different cost implications. Neither program is likely to be replicated exactly by any other state yet both are instructive in terms of the components that must be considered in building a reporting program and relative costs based on various design assumptions. As the analysis will show, Florida and New York offer useful contrasts with respect to the relationship of the mandatory reporting program to pre-existing operations within the respective state. The resulting analysis can be used by other states to assess their options and strategies for creating mandatory reporting programs and, simultaneously, enhancing their overall quality oversight responsibilities.

The development of reporting programs in both Florida and New York was in part a result of a crisis in the availability of medical malpractice insurance. Florida’s Comprehensive Medical Malpractice Act of 1985 included provisions for mandated reporting of adverse or untoward incidents. New York promulgated a regulation requiring incident reporting following a series of preventable hospital deaths; the program was subsequently included in legislation designed to address a crisis in the availability of medical malpractice insurance. Table 1 provides background information about Florida’s reporting program and the New York Patient Occurrence Reporting Tracking System (NYPORTS), gathered from these and previous visits. Refer to Appendix A for more detailed information about Florida and New York reporting requirements.

Table 1 Key Elements of Florida’s and New York’s Reporting Programs

Program Feature	Florida	New York
Agency responsible for reporting program	Risk Management Program (RMP), Agency for Health Care Administration (AHCA)	Bureau of Hospital and Primary Health Care Services, New York State Department of Health (DOH)
Number of general and acute care hospitals	273	260
Number of hospital beds	52,000	66,757

Reporting Element	Florida	New York
Number of events reported annually	1998: 4,182 1999: 3,800 (change in reporting requirements implemented) 2000: not yet available	1998: 11,367 (reporting program implemented 4/1/98) 1999: 17,799 2000: 21,434 (not yet finalized)
Percentage of events reported that are followed by on-site investigation	Approximately 20 percent	Approximately 3 percent
Number of staff	Approximately 10 FTE	Approximately 12 FTE
Contracts		\$678,000 per year with State University of New York (SUNY) School of Public Health
Method of reporting	By fax or certified mail	Internet-based with secure firewalls and encrypted data
Desk review of incidents	AHCA staff conducts follow-up as appropriate with questions, concerns, or need for further action by facility. Consultative services are available through AHCA.	DOH regional office staff are responsible for review of all reports and follow-up with hospitals as necessary. Consultative services are available through the Regional Office Medical Director, peer review organization, and professional boards. As of 6/1/00, root cause analysis (RCA) submitted for certain occurrences.
Validation methods	Current efforts to cross-reference reporting program data with hospital discharge data, complaints, media inquiries, autopsy data, chart review, malpractice actions. Annual reports are compared to 24-hour and 15-day reports to determine consistency.	Current efforts to cross-reference reporting program data with hospital discharge data, complaints, media inquiries.
Penalties and sanctions for failure to report	An administrative complaint is initiated with AHCA's attorney when RMP is convinced that a problem is not being addressed. AHCA has the authority to impose fines and sanctions. During 2000, seven hospitals were fined for failure to report and other risk management or quality assurance violations.	DOH has the authority to issue deficiencies, impose fines, suspend and revoke licenses. During 2000, three facilities were fined for failure to report or for other quality violations.

Reporting Element	Florida	New York
Use and analysis of data	<p>The agency reviews each reported incident to determine whether further investigation is required and/or whether incidents should be reported to a professional board.</p> <p>Facility-specific reports are used by surveyors during scheduled on-site surveys to assure corrective action taken as proposed or to require enhancements to proposed corrections.</p>	<p>Longitudinal web-based system for hospitals to track aggregate data by type of event and compare to peer, regional, or state facilities.</p> <p>Regional councils review each reported incident to determine whether further investigation is required and to conduct focused studies. DOH investigates serious occurrences.</p> <p>DOH issues advisories to hospitals regarding best practices.</p> <p>Facility-specific reports are used by surveyors during scheduled on-site surveys.</p> <p>Database is shared with SUNY School of Public Health for analysis and production of public report.</p>
Public reports	<p>Annual report summary lists most frequent injuries and most frequent surgeries causing injuries. Available upon request.</p> <p>Aggregate data is available on the agency's website.</p>	<p>An annual report with 1999 data for hospital-specific adequacy of reporting was developed with SUNY and released 2/12/01.</p>
Reporting program website	<p>www.fdhc.state.fl.us</p>	<p>www.health.state.ny.us</p>

COST ANALYSIS OF TWO REPORTING PROGRAMS

Essential Reporting Program Components and Cost Implications

Despite variations in the design of reporting programs, Florida and New York share common features. By analyzing Florida's and New York's costs for the development and operation of their reporting programs, NASHP was able to identify the essential cost components of such programs. Costs vary considerably between the two programs for each component; the reasons for the variations are described for each component. This information should prove useful to states as they consider the development and budget requirements for new reporting programs. The following sections summarize data that can be found in a side-by-side comparison of the two states' cost components, as presented in Appendix B.

Information system design or acquisition

Costs may be incurred to purchase hardware and software, establish networking, create websites, and install database programming and data security systems to support the collection, storage, and analysis of data received through mandatory reporting programs. The design and complexity of information systems will be dependent on the data collection and entry method used. In New York, reports must be submitted via a secure Internet site developed specifically for the reporting program; in Florida, reports are submitted by certified mail or fax and subsequently entered into a database by reporting program officials. As a result, New York's information system costs greatly exceed those of Florida, but its data entry costs are minimal since the costs are borne directly by the reporting facilities as opposed to the reporting program. Information system costs will be dependent on whether there is an underlying management information and security system already in place and the computer support available from the agency for upgrades and refinements. To provide ongoing systems administrative support, New York has 0.55 FTE and Florida has 0.20 FTE.

Data collection and entry

Costs may be incurred for activities related to the collection, filing, and entry of reported information into a database. As noted above, the method of reporting greatly impacts the costs associated with data collection and entry. If reports are received by phone, fax, or mail, the reporting program must have clerical staff responsible for intake and entry of incident reports, as demonstrated in Florida. If reports are received electronically, staff must be available to provide technical support to reporting facilities that experience data entry problems, as in New York. Hard copy reports require additional time to check data for accuracy and completeness, whereas electronic systems can be developed with built-in edits that make it difficult for data reporters to make errors or file incomplete reports. As a result, Florida uses approximately 1.6 FTE for data entry; minimal time is spent on this function in New York. In either case, staff must be available to provide assistance and answer questions about what should be reported, when, and how.

Desk review

Once incidents are reported to the state, costs are incurred to review and determine the appropriate course of action. The costs will depend on the process used for desk review and the amount of follow-up required, which will be partially dependent on the states' clarity about what and how to report. Both Florida and New York follow up with incident reporters by phone to clarify circumstances leading to an incident. Although New York's desk review process is performed regionally, Florida's is centralized. In Florida, desk review is conducted by a registered nurse in the central office who consults with a team of experts on difficult cases during a weekly panel review to determine any need for follow-up action. The time of the various specialists who participate as members of the panel is donated by AHCA. In New York, review is generally decentralized, with most reviews conducted in each region by registered nurses. Outside consultants are rarely used in New York during the desk review process although central office staff may be consulted. Staff allocation for desk review in Florida is approximately 1.2 FTE; in New York it is approximately 2.7 FTE.

Investigation

Costs are incurred for activities related to review and investigation of reported incidents beyond the initial screening and follow-up telephone calls to the reporting entities. These activities may include the collection and review of additional information, chart reviews, staff interviews, on-site investigations, and the use of agency or outside experts to assist in the review of an incident. New York requires a separate submission of a root cause analysis, which includes an analysis of factors contributing to the event, and an action plan for responding to the incident.

Both Florida and New York make use of regional survey units to perform on-site investigations when warranted. Florida has eight regional offices. Within the regional offices, approximately 100 employees participate in investigations of incident reports, spending approximately five percent of their time performing this function. This translates to 0.63 FTE per region or 5.0 FTE statewide. New York has seven regional offices with 0.5 FTE per region for investigation of incident reports, except in the New York City region, where there are 3.0 FTEs. This translates to 6.0 FTEs statewide. In both states, investigations are conducted by physicians and registered nurses. The figures noted above include registered nurses only.

Costs also vary according to the percentage of reports that trigger an on-site investigation. Although only 3 percent of reports are investigated in New York, 20 percent are investigated by the reporting program in Florida. These numbers reflect the severity of events that must be reported in Florida versus the broader range of events, including the most serious, that must be reported in New York.

Validation

Costs may be incurred for activities related to validating reports, in order to determine whether facilities are complying with reporting requirements and to establish a baseline against which to measure change over time. Costs vary depending on the complexity of the validation process. Both Florida and New York report that efforts to validate data and reduce discrepancies evolve continuously. Reporting programs must constantly search for new mechanisms to validate data so that the process remains unpredictable and does not encourage gaming within facilities.

Currently both states validate data by following up on media reports, identifying reportable incidents through the complaint process, conducting random on-site chart reviews, and attempting to match incident reports to hospital discharge data records. Florida compares data submitted on various reporting forms, including 24-hour report forms, annual report forms, and reports of malpractice actions. The state is currently examining the use of autopsy data for cross-validation. In addition to validating initial incident reports, every report that results from an on-site investigation in Florida is reviewed for quality control purposes. Reporting program officials in Florida are responsible for conducting validation activities. The New York program contracts with the SUNY School of Public Health to work with the state in validating the accuracy of incident reports. This validation process focuses on comparing information collected through the hospital discharge data system (SPARCS) with reported incidents.

Analysis

Costs are incurred for activities related to synthesizing and trending information collected from reportable incidents for internal use by program administrators. Costs vary depending on the purpose of the reporting program and the amount of analysis that is desired. For example, if the purpose of the reporting program is to remedy an individual incident only, less analysis may be required than programs designed to understand and proactively intervene on patterns of medical errors and adverse events.

Costs will also vary depending on whether analysis is conducted internally or under contractual arrangement and the sophistication of the analyses performed. Florida produces an annual summary report indicating the most common reported injuries and the procedures most likely to result in injury. New York publishes a quarterly newsletter for facilities that highlights specific aggregate trends and describes facility best practices to reduce repeat incidents. New York also provides web-based reports to hospitals that allow them to track and trend their own reportable incidents and to compare their performances against their peers, within their regions, and statewide. New York recently published its first public report which provides hospital-specific information on level and completeness of reporting. The report is available on the Department's website. Similar to validation activities, reporting program officials in Florida are responsible for conducting analyses; the New York program contracts with the SUNY School of Public Health to assist in these analyses.

Training, information sharing, and education

Costs are incurred for activities related to educating facilities about reporting requirements and producing and sharing hospital-specific and aggregate reports with both internal and external audiences. Again, costs vary depending on the entity that conducts the educational activities and whether they are conducted through staff time, contracts, or on a volunteer basis. Education about reporting requirements may vary with the complexity of the reporting system. Information sharing will vary depending on the amount of analysis there is to share.

Florida conducts training for regional investigators annually in addition to fielding phone calls and providing technical assistance to risk managers. When New York's reporting program began, reporting program officials conducted seven training sessions for facilities to familiarize them with the program. Six additional training sessions have been held and additional sessions will be added as needed. Many of these training programs were conducted under the sponsorship of the hospital association at no, or limited, cost to the state. These training programs were above and beyond the routine training conducted for regional investigators. Florida reporting program officials conduct some educational activities directly and rely on consultants to provide some programs; in New York, education is conducted by the central office.

Florida's annual summary report and New York's hospital-specific reports are available on the Internet. The New York program's safety alerts and quarterly newsletter are produced in hard copy and are distributed to all facilities. Although New York contracts for development of its reports, Florida produces its annual report internally. This difference contributes to the nearly twice as many FTEs in Florida as in New York for training, education, and information sharing.

Costs for training and education may also vary, based on the skill levels of facility-designated persons responsible for reporting, as well as the requirements of the reporting program. In Florida, licensed risk managers are responsible for administering facility reporting programs. Risk managers must meet certain educational requirements to be licensed and must provide education within their facilities. Their licenses can be revoked for violations. New York requires facilities to designate an individual to serve as the NYPORTS coordinator. Coordinators are not licensed; most are located within a facility's quality management or risk management division.

Administration

Administrative costs include the overall management and enforcement of the mandatory reporting programs, separate and distinct from other program components. Florida employs two administrators who each spend approximately half of their time administering the reporting program. The administrators also participate in weekly panel reviews of reports, validate data, perform analyses and generate reports, and consult with risk managers by phone and in the field. New York's program is less centralized. The state relies on seven regional supervisors who dedicate 10 percent of their time to administering the reporting programs, for a total of 0.70 FTE, and are supported with approximately 0.04 FTE at the state level.

Both Florida and New York central staff support advisory councils that meet quarterly. The Florida Advisory Council establishes policies and is developing a model plan for facility risk management. The NYPORTS Statewide Council advises on program direction and enhancements. New York regional staff also support regional councils that meet quarterly to review trends and opportunities for improving patient safety in their regions.

As is evident from the above analysis, the essential cost components are similar for Florida and New York's reporting programs; however, the costs within each component vary depending on design features and resources available.

LESSONS LEARNED

Segregating the costs of each component of a mandatory reporting program is instructive in estimating approximate budgets for such an endeavor. However, the foregoing analysis may be misleading if component costs are simply added together to calculate resource requirements for establishing a mandatory reporting program. Other, less tangible, factors were shown to bear directly on the financial commitment required to create and sustain reporting programs.

Costs for a mandatory reporting program are influenced by the goals of the program and the ability to leverage existing resources.

Both the Florida and New York reporting programs were developed to increase state oversight of hospital quality as a result of crises in medical malpractice insurance. Nevertheless, the two states decided to execute their programs in very different ways. Cost variations in these two states tended to be related to the design of the information systems they put in place. In other states, in addition to variations in information systems, there is likely to be greater variation in goals. For example, states that want to place greater emphasis on systems improvement through data analysis, follow-up, and dissemination will have higher costs than those states whose primary aim is to hold facilities accountable for single incidents.

Many of the functions inherent in a mandatory reporting program are not new to state agencies but parallel those currently performed within licensure and certification units (e.g., complaints, desk reviews, investigations). The introduction of a reporting program does not necessarily require a sizeable influx of new positions. This outcome is dependent, however, on several important factors. First, workloads of existing staff must be adjusted to accommodate the time for tasks that support the reporting program. In Florida, for example, the program began with just one dedicated administrative staff position; clerical and nursing time were borrowed from other departments. Additional staff were added gradually. In New York, staffing was accomplished by designing the reporting program in ways that improved the overall efficiency of existing staff. Second, the reporting program must be seen as an integral component of the state's quality oversight system that warrants the redeployment of resources. This means that it has attracted the attention of leadership as an investment with tangible benefits. Finally, management of the reporting program must be sufficiently senior to be able to see and execute synergies with adjacent agency functions.

Mandatory reporting programs offer an opportunity to enhance the effectiveness (and cost efficiency) of a state's overall quality oversight program.

When viewed from this perspective, a mandatory reporting program is part of a larger web of quality oversight functions, each mutually dependent and supportive of the other. The design of a reporting program provides an opportunity to re-think the state's quality oversight function within a state and its dependence on the flow and integration of information. For instance, the Florida reporting program

requires reporting of E-codes and malpractice actions as well as adverse events in an attempt to provide a broader view of patient safety issues. A partnership with the Medicaid department, which is also located within AHCA, provides leverage to enforce improvements that are required by the reporting program.

Integral to the design of such a system can be its capacity to automate data collection and transfer processes. New York conceptualized web-based technology that transferred the data entry function for incident reporting to facilities while simultaneously expediting the flow of information to the regional offices for review and follow-up. The technology allows concurrent review by central and regional office staff, direct interface with hospitals for the receipt of supporting information and root cause analyses, and the capacity to interface with other functions within the state, such as complaints, survey investigations, and hospital discharge data analyses. In other words, the reporting system improved the functionality of other oversight activities at the same time it satisfied regulatory requirements for incident reporting. By streamlining the flow and analysis of information, greater emphasis was given to solving problems, detecting trends, and disseminating findings to providers and consumers.

Up-front investments in mandatory reporting systems should be considered separate from the costs of maintaining the system.

The ability to leverage resources and redeploy existing staff to operate the system does not reduce the initial costs of designing a system, purchasing hardware, developing applications and training staff and providers. These costs will vary significantly depending on the sophistication of the design and opportunities to build on existing systems. Florida chose to reduce initial costs by building their program as an add-on to an existing infrastructure, making incremental improvements over time as resources become available. New York, on the other hand, made up-front investments to create a web-based technology that, while costly, led to immediate efficiencies throughout its operations.

Evaluation costs should be considered separately.

Recent work conducted by NASHP found that little is known about the impact of mandatory reporting programs on patient safety. States and other stakeholders generally contend that impact may be limited by chronic under-reporting and/or by lack of sufficient follow-up by state agencies to ensure that needed improvements are made, patterns are detected, and information is shared among all hospitals to reduce reoccurrence. Without documentation to the contrary, states are unable to make a convincing case for establishing or enhancing mandatory reporting programs. This places a special responsibility on those with existing programs to invest in validating the accuracy of their reporting programs and in producing routine reports showing trends and impact. Few states have the analytic resources to do so, necessitating potential partnerships with university-based health services research programs, Peer Review Organizations (PROs), or other external experts.

There are many intangible costs that cannot be easily calculated.

The analysis presented in this paper provides a basic framework for states to use in calculating cost implications of various components of a mandatory reporting system. Less tangible factors also influence costs yet are far more idiosyncratic to a state and do not lend themselves to cross- state comparisons. For example, a state agency's historic relationship with the provider community may affect reporting levels as well as the willingness to share costs for training and education programs. An agency's internal culture may impede or enhance opportunities for sharing resources and expertise. Finally, the culture of medicine within a state and within individual facilities not only affects reporting levels but also cooperation levels during the investigation and quality improvement processes. In other words, mandatory reporting programs operate within an organizational and environmental context that is important to take into account when determining the level of effort necessary to introduce and sustain the requirements of a mandatory reporting program.

CONCLUSIONS

This study confirmed the difficulty of developing definitive cost estimates for state-based mandatory reporting programs. Variations in current state infrastructures, program design, staffing flexibility, and dependency on outside consultants impact costs. Perhaps most significantly, it is virtually impossible to isolate discrete costs for many of the activities related to mandatory reporting programs since they are part of broader routine functions within state licensure and certification units. Despite these cautions, several important conclusions can be reached.

- Marginal increases in costs can be expected for administrative and investigative activities. Opportunities for redeploying existing staff are greatest in these areas; staff increases will be dependent on the expected volume of reported incidents and their level of severity. This is one of the few costs that is dependent on volume of reports.
- Costs related to information systems design and maintenance are dependent on a state's existing system, the complexity of reporting program requirements, and the viability of instituting upgrades to meet those requirements. Electronic reporting is likely to reduce the costs to reporting facilities, which may result in more complete and better quality information and reduce follow-up and validation costs.
- Costs associated with analyzing, validating, and reporting data are most likely to represent substantial new costs to states. Few states have the research and evaluation capacity required to perform these functions without the infusion of new staff and/or external contracts.

The following chart summarizes findings with respect to cost ranges for each of the above activities.

Table 2 Cost Ranges for Reporting Program Activities in Florida and New York

Function	In-house FTE	Estimated costs for in-house or contractual work
Administration	0.5–0.75 FTE	
Systems design and maintenance*		\$50,000–275,000
Investigation	5–6 (1 FTE per 100-200 investigations)	
Data analysis and validation		\$200,000–\$675,000

*Assumes underlying system in place

The experiences of Florida and New York illustrate that many of the above costs can be absorbed into existing state budgets. Florida receives funding from state sources, including licensure fees and fines, but does not receive general revenue funds. New York receives funding from the general revenue fund for hospital surveillance activities. The reporting program also received special funding from a legislative grant for start-up costs. No federal funds are currently available for reporting programs.

Although many program costs can be absorbed into existing state budgets, states will require additional funding to assume the analysis tasks related to tracking, validating and reporting data in ways that provide useful information to the provider and consumer communities regarding trends in patient safety. These costs will vary with the intended goal of the program; if data are intended to be trended and shared widely, costs will be greater for analysis than if data are intended for investigation of individual incidents for immediate intervention only.

This cost analysis demonstrated that marginal costs for operating reporting programs may be less than anticipated; however, both states indicated a need for additional resources to increase the usefulness and effectiveness of their programs. Although the Institute of Medicine report recommends that funding and technical expertise be provided by Congress to all state governments to establish error reporting systems or adapt their current systems, funding has not yet been made available.

Appendix A

Florida and New York Reporting Requirements

Reporting Element	Florida	New York
Legislative history of reporting system	<p>The medical malpractice crisis during the mid-1980s led to the promulgation of the Comprehensive Medical Malpractice Act of 1985, with provisions mandating reporting of adverse or untoward incidents to the Florida Agency for Health Care Administration (AHCA). The legislature modified reporting requirements in 1998, adding a 24-hour reporting provision, redefining the scope of reportable incidents, and increasing the state's ability to impose fines.</p>	<p>Initial regulations requiring incident reporting were promulgated in 1985. Shortly thereafter, a medical malpractice crisis during the mid-1980's led to the enactment of a statutory reporting requirement. The reporting requirement represents a compromise between trial lawyers, physicians, and hospitals.</p>
Reportable incidents	<p>The term "adverse incident" means an event over which healthcare personnel could exercise control and one that is associated in whole or in part with medical intervention, rather than the condition for which such intervention occurred, and that meets one of the criteria listed below.</p> <p>Results in one of the following injuries:</p> <ul style="list-style-type: none"> • death; • brain or spinal damage; • permanent disfigurement; • fracture or dislocation of bones or joints; • a resulting limitation of neurological, physical, or sensory function that continues after discharge from the facility; • any condition that requires specialized medical attention or surgical intervention resulting from non-emergency medical intervention, other than an emergency medical condition, to which the patient has not given his or her informed consent; or • any condition that required the transfer of the patient, within or outside the facility, to a unit providing a more acute level of care due to the adverse incident rather than the patient's condition prior to the adverse incident. <p>Was the performance of surgical procedure on wrong patient, a wrong surgical procedure, a wrong-site surgical procedure, or a surgical procedure otherwise unrelated to the patient's diagnosis or medical condition.</p> <p>Required the surgical repair of damage resulting to a patient from a planned surgical procedure, in which the damage was not a recognized specific risk, as disclosed to the patient and documented through the informed consent process.</p> <p>Was a procedure to remove unplanned foreign objects remaining from a surgical procedure.</p>	<p>Reportable incidents include the following:</p> <p>Patient deaths unrelated to the natural course of illness, disease, or proper treatment in accordance with generally accepted medical standards.</p> <p>Injuries and impairments of bodily functions in circumstances other than those related to the natural course of illness, disease, or proper treatment in accordance with generally accepted medical standards.</p> <p>Equipment malfunction or equipment user error occurring during treatment or diagnosis of a patient that did or could have adversely affected a patient or personnel.</p> <p>Other: fires or internal disasters, poisoning, patient elopements and kidnaping, strikes, disasters, unscheduled termination of any services vital to the continued safe operation of the facility or health and safety of its patients and personnel.</p> <p>Additionally, adverse events with less serious patient outcomes, such as complications of surgery, burns, falls, etc., are reported for aggregate tracking and trending.</p>

Reporting Element	Florida	New York
Format for reporting	A standard format is used.	Short form and Root Cause Analysis (RCA) formats: <ul style="list-style-type: none"> • RCA: This is required for unanticipated patient death or major permanent loss of function unrelated to the natural course of patient's illness or underlying condition or if the event is a suicide, infant abduction, infant discharge to wrong family, rape, incorrect procedure, or treatment-invasive, wrong-site surgery, or retained foreign body. • Short form: This is required for all other reportable events. • The short form collects data about the event. The RCA is an internal hospital investigation on a case-by case-basis.
Reporting time frame	Reports are to be filed: Within 24 hours of notification of the incident: death; brain or spinal damage; surgical procedure on the wrong patient; wrong site surgery; or wrong surgical procedure. Within 15 days: Corrective action plans and identification of causative factors for the above incidents and initial notification for: medically unnecessary surgery; surgical repair of damage resulting to a patient from a planned surgical procedure; performance of procedures to remove unplanned foreign objects remaining from a surgical procedure. Annually: Number and type of adverse incidents and description of malpractice claims.	Reports are to be filed: Within 24 hours or 1 working day of the hospital becoming aware of the occurrence, for events requiring RCA or events specified in statute.
Method of reporting	Reports should be filed by fax or certified mail.	Reporting is Internet-based, with secure firewalls.
Who reports	Risk managers are responsible for reporting.	An identified contact within the facility, usually a risk manager or quality division staff, reports.

Reporting Element	Florida	New York
Data validation methods	<p>A current effort is underway to cross-reference data obtained through the reporting system with hospital discharge data.</p> <p>Annual reports are compared to 24-hour and 15-day reports to determine consistency.</p> <p>Incident reports are compared to complaints.</p>	<p>During the surveillance process (i.e., complaint investigations), the accuracy of information or the failure to report an adverse event is assessed.</p> <p>Follow-up is performed on media inquiries.</p> <p>The process is currently ongoing of crosswalking the New York Patient Occurrence Reporting Tracking System (NYPORTS) with hospital discharge data.</p>
Under-reporting	Yes.	Variation in reporting has been identified.
Penalties and sanctions for failure to report	<p>AHCA has the authority to impose fines and sanctions for failure to report and other risk management or quality assurance violations. Last year, seven hospitals were fined, for total of \$379,000.</p>	<p>The Department of Health (DOH) has the authority to issue deficiencies, impose fines, suspend and revoke licenses. During 2000, three facilities have been fined for failure to report or for other quality violations.</p>
Other information collected through the system	<p>The reporting system applies to hospitals and ambulatory care centers. In addition to specific information on adverse events, the reporting system includes related data on E-codes, corrective action, and malpractice claims.</p>	<p>Data is collected from hospitals and ambulatory care centers. In addition to occurrence reporting, the system requires information on actions taken by the facility, process improvements that others can learn from, and lessons that could be globally beneficial and shared with other hospitals. RCA must be submitted for all occurrences requiring the long form. Information is also collected on laboratories, psychiatric hospitals, and outpatient mental health centers in similar systems.</p>
Mandated as condition of licensing (Y/N)	Yes.	Yes.
Desk review of incidents	<p>AHCA staff follow-up is performed, as appropriate, with questions, concerns, or need for further action by facility.</p>	<p>DOH regional office staff are responsible for the review of all reports and follow up with hospitals as necessary. Consultative services are available through the regional office medical director, peer review organization, and professional boards. As of 6/1/00, RCA is submitted for occurrences requiring the long form.</p>

Reporting Element	Florida	New York
Use and analysis of data	<p>The agency reviews each reported incident to determine whether further investigation is required and/or if the incident should be reported to a professional board.</p> <p>Facility-specific reports are used by surveyors during scheduled on-site surveys to assure that corrective action has been taken as proposed or to require enhancements to the proposed corrections.</p>	<p>A longitudinal web-based system is used for hospitals to track aggregate data by type of event and compare the results to peer, regional, or state facilities.</p> <p>DOH investigates serious occurrences.</p> <p>Regional councils analyze data and conduct focused studies.</p> <p>DOH issues advisories to hospitals regarding best practices.</p> <p>Data is used by surveyors during scheduled on-site visits.</p> <p>The data base is shared with SUNY School of Public Health for analysis and production of a public report.</p>
Sharing of data within state agency	<p>Data is confidential and used by surveyors only; it cannot be shared, even among state agencies.</p>	<p>Hospital-specific data is available on web-based system for review by assigned users within DOH for tracking and required follow-up.</p>
Storage of data	<p>Data is stored in a risk management module of the centralized computer system. The computerized risk management module is password protected, and access is granted through the program administrator. Hard copies are maintained in locked facilities within the risk management files, with a copy of Code 15s maintained in a secure numerical sequence file. Original reports are directly accessible to risk management personnel, with authorized access granted to investigative staff and others within the agency as necessary to accomplish statutory duties.</p>	<p>Data is submitted electronically and stored in a secure, limited access, web-based DOH system.</p>
Public reports	<p>The annual report summary lists the most frequent injuries and most frequent surgeries causing injuries. It is available upon request, as are raw numbers reflecting the number of particular types of injuries reported and the number of disciplinary actions reported against medical staff.</p>	<p>An annual report with 1999 data for hospital-specific adequacy of reporting was developed with SUNY and released 2/12/01.</p>
Confidentiality, discovery, and other legal protections for data within the control of reporting system officials	<p>Statutory provision makes reports of adverse and untoward incidents confidential and not subject to discovery or admission into evidence in civil lawsuits.</p>	<p>Statutory provisions make reports, submitted in compliance with the reporting requirement, confidential and protects individuals making reports from civil lawsuits and monetary damages.</p>

Reporting Element	Florida	New York
Direct legal challenges to legal protections for data <i>within the control of</i> regulatory agency	There are no known challenges.	The confidentiality provision was challenged under the state's Freedom of Information Law in 1997 (see below).
Freedom of Information requirements	Florida's Open Records Act exempts reports of adverse and untoward events from the general requirement that documents and papers must be made available for public inspection.	In a 1997 decision, the court ruled that under New York's Freedom of Information Law (FOIL), incident reports <i>are</i> protected by the confidentiality statute. However, the court ruled that hospital specific aggregate (annual) data is releasable.
Provisions for public release of data upon request	Aggregate incident information is available upon request and is on AHCA's website. Names of hospitals and individuals are not available.	Hospital-specific aggregate (annual) data by occurrence code must be released pursuant to the state's FOIL. A report is being prepared for public release based on analysis by the SUNY School of Public Health.
Relationship with other reporting systems	Information is shared with professional boards. The Commission for Excellence in Health Care has explored coordination of data sources. Although AHCA is not responsible for the intake of complaints, it does investigate complaints and stores information in a common database with incident reports.	Information is routinely shared with the medical board. To reduce duplication, incidents that are reported to other state reporting systems do not have to be reported to NYPORTS.
Licensure survey requirements	There is a statutory requirement for biennial licensure survey.	Statutory requirements of determination of fitness and adequacy to provide services must be met prior to issuance of operating certificate. There is ongoing surveillance of facility operation, at no specifically required intervals, to ensure statutory and regulatory compliance.
Relationships regarding JCAHO/ Medicare certification	The Florida ACHA deems JCAHO accreditation as meeting its biennial licensure requirements and performs validation surveys on approximately five percent of JCAHO-accredited facilities each year, as directed by HCFA.	The DOH does not deem JCAHO accreditation; however, it has a contract with JCAHO to share surveillance information. The contract is based on information sharing of the overall surveillance process, which includes complaint and incident investigations and a range of other surveillance activities.

Reporting Element	Florida	New York
Limitations on JCAHO deeming	There is no deeming for purposes of incident and compliant investigation. Life safety (fire) and risk management surveys are conducted on an annual basis.	No deeming is done. The DOH conducts surveillance activities, such as initial licensure, complaint investigations, and investigation of reported incidents, and shares information with JCAHO.

Appendix B

Florida and New York Reporting Program Costs

1. **Name of office:** Bureau of Hospital and Primary Care Services (BPC)
2. **Name of umbrella organization:** New York State Department of Health (DOH)
3. **Location/reporting relationship of office within umbrella organization:** The bureau reports to the Division of Health Care Standards and Surveillance for some functions and reports directly to Department of Health executive staff for most significant activities.
4. **Responsibilities of office:** Reporting system (NYPORTS) development, implementation, and management. State licensure surveys, federal Medicare surveys, complaint investigations, certificate of need (character and competence components), Medicaid utilization review, poison control centers. Activities involve both hospitals and diagnostic and treatment centers. Other duties include code interpretations, statewide policy development, oversight of regional office activities, Cardiac Advisory Committee and cardiac data system/publication, and survey contract management with the Joint Commission for Accreditation of Health Care Organizations (JCAHO).
5. **How many general and acute care hospitals exist in your state?**
260
6. **What percentage of general and acute care hospitals are JCAHO accredited?** 98%
7. **How many incident reports were submitted to the mandatory reporting system in:**

1998	11,367 (NYPORTS implemented 4/1/98)*
1999	17,799*
2000	21,434* (not yet finalized)

** Numbers include reports from hospitals and diagnostic and treatment centers. In 2000, reports from diagnostic and treatment centers represented less than 200 of total reports.*

1. **Name of office:** Risk Management Program (RMP)
2. **Name of umbrella organization:** Florida Agency for Health Care Administration (AHCA)
3. **Location/reporting relationship of office within umbrella organization:** The program is located within the Bureau of Facility Regulation, within the Department of Managed Care and Health Quality, within AHCA.
4. **Responsibilities of office:** Reporting system development, implementation, and management. Activities involve general and acute care hospitals, psychiatric hospitals, and ambulatory surgery centers. Complaint investigation, state licensure surveys, federal Medicare surveys, and Medicaid fraud unit are handled within other programs of AHCA.
5. **How many general and acute care hospitals exist in your state?**
273
6. **What percentage of general and acute care hospitals are JCAHO accredited?** 90%
7. **How many incident reports were submitted to the mandatory reporting system in:**

1998	4182
1999	3800 (change in reporting requirements)
2000	Not yet available

Information System Design or Acquisition **New York**

Equipment

Computer hardware and software, networking costs, websites, database programming, data security systems, ancillaries related to operating the mandatory reporting system.

System Component (including consultants)	Start-up Costs	Annual Maintenance costs
Underlying system already in place	\$300,000*	
Needs assessment (separate contractor from below)	\$5,000	
1998 subcontract to develop web-based system application (includes \$25,000 for server and four PCs)	\$160,000 (over 2 years)	
2000 systems upgrades and refinements	\$50,000	
Security	Handled through another unit	
Hospitals' equipment and security patch (Microsoft Windows/NT environment)	Facility cost	
System upgrades		\$58,000 (bi-annual costs)

* Regional personal computers to carry out overfall surveillance activities.

System Administrative Support

Position	Assigned Unit	Responsibility	FTE
Systems administrator	BPC	Maintain system at state and regional levels; interface with provider regarding information system matters	0.55
Contractor		Glitches	No costs to date

Information System Design or Acquisition **Florida**

Equipment

Computer hardware and software, networking costs, websites, database programming, data security systems, ancillaries related to operating the mandatory reporting system.

System Component (including consultants)	Start-up Costs	Annual Maintenance Costs
1995 contract to design computer system to generate reports	\$20,000–\$30,000 estimate	
Last requested system upgrade		\$6,000–\$8,000
Revise as funding is available from AHCA		
Security	Handled through another department	

System Administrative Support

Position	Assigned Unit	Responsibility	FTE
Systems support	AHCA	Maintain system	0.2
Contractor		System modifications	

Data Collection and Entry **New York**

Staffing

Position	Assigned Unit	Responsibility	FTE
Regional staff	Regions	Completeness review; help in answering/interpreting program issues/policy	Minimal
Central staff	BPC	Respond to regional questions	Minimal
Systems administrator	BPC	Data entry problems by facilities	0.15

NOTE: Facilities bear primary responsibility for data entry.

Desk Review **New York**

Staffing

Position	Assigned Unit	Responsibility	FTE
NYPORTS regional coordinators	Regions	Triage based on severity; refer serious incidents to investigative team within regional survey unit.	NYC region: 1.0 6 other regions: 1.50 (0.25 per region)
Regional program director	Regions	Consultative role with surveyors	0.1
State program director	BPC	Consultative role	0.05

Data Collection and Entry **Florida**

Staffing

Position	Assigned Unit	Responsibility	FTE
Central support staff	RMP	Clerical duties, intake, and entry of incident reports	1.0
Central support staff	RMP	Contract for annual report intake, data entry	0.5
Central support staff	RMP	Entering 24-hour reports and sharing information	0.05 to 0.1

Desk Review **Florida**

Staffing

Position	Assigned Unit	Responsibility	FTE
Program administrator	RMP	Consultation	0.1
Operations/Management administrator	RMP	Consultation	0.1
RN	RMP	Initial review, notifies administration and area offices for on-site investigation, quality control	1.0

Consultants/Experts

Entity	Scope of activity	Estimated Annual Cost
Surgeon	Weekly panel review	0.05
Practitioner investigator	Weekly panel review	0.05
Various specialists	Weekly panel review	0.05
RN	Weekly panel review	0.08

Investigations	New York
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Staffing

Position	Assigned Unit	Qualifications	Responsibility	FTE
Regional NYPORTS coordinators/RNs	Regions	RN	Conduct investigations	NYC region: 3.0 6 other regions: 3.0 (0.5 per region)
State program director	BPC		Consultative role	0.1
Director of BPC	BPC		Consultative role	0.05
Regional medical director	BPC	MD	Part of investigative team	NYC region: 1.0 6 other regions: 0.6 (0.1 per region)

Consultants/Experts

Entity	Scope of activity	Estimated annual cost
Peer Review Organization	Expert on specialized cases	Small amount; brought in on 12–24 cases per year

Investigations	Florida
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Staffing

Position	Assigned Unit	Qualifications	Responsibility	FTE
Central staff	RMP		Consultation	minimal
Eight regional office staff	Bureau of Facility Regulation	RN	On-site investigations	100 staff x 0.5 FTE = 5.0

Data Validation and Analysis**New York****Staffing**

Position	Assigned Unit	Types of Analysis	FTE
Systems administrator	BPC	Routine reports for facilities and regional councils	0.05

Consultants/Experts

Entity	Scope of activity	Estimated annual cost
SUNY School of Public Health	Work with SPARCS (hospital discharge database) and NYPORTS staff to: validate NYPORTS through match with SPARCS and chart review; routine analyses; system upgrades	\$678,000 per year (half of costs related to validation activities). Source of funds: Health Care Reform Act

Data Validation and Analysis**Florida****Staffing**

Position	Assigned Unit	Responsibility	FTE
Program administrator	RMP	Reviewing malpractice actions noted on annual reports, looking at autopsy data, cross-referencing hospital discharge data, responding to media reports, matching to complaints, etc.	0.15
Operations/ Management administrator	RMP	Reviewing malpractice actions noted on annual reports, looking at autopsy data, cross-referencing hospital discharge data, responding to media reports, matching to complaints, etc.	0.15

Training, Information Sharing, and Education	New York
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Staffing

Position	Type of Reports/Education	FTE
State program director, production specialist	Quarterly newsletter to facilities (includes aggregate reports and narrative on best practices)	0.05
State program director	Initial training (7); additional training (6 in June 2000); ongoing	0.10
State program director	Educational workshops at facility/professional association level	0.05
Director of BPC	Training and education	0.05
State director of BPC, program director	Assistance in writing public report	0.02

Consultants/Experts

Entity	Scope of Activity	Estimated Annual Cost
SUNY	Analyses for public report	Part of larger contract

Training, Information Sharing, and Education	Florida
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Staffing

Position	Type of Reports/Education	FTE
RN	Notifies area offices about 24-hour reports	Included in desk review
Program administrator	Conducts investigator training, develops internal and aggregate reports, other consultation	0.25
Operations/Management administrator	Conducts investigator training, develops internal and aggregate reports, other consultation	0.25

Consultants/Experts

Entity	Scope of activity	Estimated annual cost
Consultant physician	Educational workshops at facility/professional association level	0.1 FTE

Administration**New York**

Other costs related to operating and enforcement of the mandatory reporting system.

Staffing (*General administration and management functions*)

Position	Responsibilities	FTE
Regional NYPORTS coordinators	Support of regional councils	0.7 (0.1 per region)
Director of BPC, State program director	Support of statewide council and regional councils	0.04

Other Costs

Item	Estimated Annual Costs
Support of regional councils: lunch, sub-committees, special reports, travel to meeting	\$5,000 per year for direct costs; approximately 1.0 FTE
Education/training	Generally hosted by hospitals or associations

Administration**Florida**

Other costs related to operating and enforcement of the mandatory reporting system.

Staffing (*General administration and management functions*)

Position	Responsibilities	FTE
Program administrator	Legislative analysis, rule development, correspondence, advisory council preparation	0.5
Operations/Management administrator	Legislative analysis, rule development, correspondence, advisory council preparation	0.5
Legal support		0.2

Other Costs

Item	Estimated Annual Costs
Postage	\$1,200
Supplies	\$4,200
Phone	\$2,400
Printing	\$1,200
Travel	\$15,000
Utilities	\$1,500
Rent	\$24,000
Subscriptions	\$1,200

Desired Enhancements	New York
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Identify estimated costs related to desired improvements with respect to staffing, consultants, equipment, and other improvements to the mandatory reporting system.

Desired Enhancement	Estimated Cost
Full impact of Root Cause Analysis review not felt; implemented in July 2000	
Every 2 years: upgrades refinements to system, including hardware	\$58,000
Make system more functional for regions (electronic tracking of info)	
Refine definitions/processes for reporting back to facilities and to the public.	

Desired Enhancements	Florida
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Identify estimated costs related to desired improvements with respect to staffing, consultants, equipment and other improvements to the mandatory reporting system.

Desired Enhancement	Estimated Cost
Budget request for team of surveyors based in central office for in-depth hospital reviews	\$300,000
Budget request for data entry staff	\$15,000
Additional legal resources and consultants	
Systems improvements and risk management instruction	Partnership with university

Summary**New York****Overall Total Staffing:**

State level:	FTE
Director of Bureau of Hospital and Primary Care Services	0.13
State program director, HPCS; Capital District Field Office	0.38
Systems administrator	0.75
Consultants	As needed <i>(including \$678,000 SUNY contract)</i>

Regional level:

Surveyors	RN	9.2
Program director	RN	0.1
Regional medical director		1.6

Summary**Florida****Overall Total Staffing:**

State level:	FTE
Program administrator	1
Operations/Management consultant administrator	1
Clerical support	1.6
Registered nurse	1
Systems support	0.2
Consultants (internally through AHCA)	As needed

Regional level:

Surveyors	RN	5
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