Statewide Data Systems: Entering a New Era

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by Denise Love

Statewide data systems are the mainstay of many state and federal data systems and of many quality assessment, research, and policy initiatives. The author gives an overview of the different kinds of systems available and looks at opportunities for growth in the future, as well as for HIM professionals.

Since the early 1980s, the push has been on to collect and analyze health systems data. Why? Experts assumed that variations in healthcare utilization and outcomes result in waste and preventable morbidity. As a result, the quest for uniform, comparable, and valid healthcare data to foster healthcare improvement and change was on, and inpatient data fit the bill.

Since then, statewide discharge data systems have proliferated across the country. These systems, largely comprised of inpatient data, have been the mainstay of many state and federal data systems, and the utility of the data for quality assessment, research, and policy has been well documented.

These inpatient systems propelled the healthcare industry into a new era of data sharing, public dissemination, and national standards. As the pace of change in the healthcare industry accelerates, fueled by national standardization and information technologies, new information will be demanded. This article examines how these databases are used, how new trends in health information are affecting them, and opportunities for HIM professionals to play a role in these efforts.

Who Collects Discharge Data?

In 1998, 44 states collected all payers' inpatient discharge data from acute care and licensed hospitals (see "Statewide Inpatient Discharge Data Collection" and "Discharge Data Collection Practices").[1] Also called administrative data or discharge data, these data are a complete record containing demographic, clinical, and billing data. Discharge data are generally classified as inpatient (for patients admitted to a facility or hospital) and non-inpatient (which includes ambulatory surgery, emergency department, and all other encounter data for patients not admitted to a hospital).

The majority of these states (39) have in place a governing statute requiring the reporting of discharge data, and approximately a dozen states have implemented voluntary reporting systems, often through a state hospital association or private data agency.[2] Although agencies vary in their governing structures, states have worked with their industry partners and peer states to share best practices in ensuring compliance to reporting standards, improving data quality, and disseminating meaningful information to broad audiences.

Prior to the Health Insurance Portability and Accountability Act (HIPAA) of 1996, which establishes national standards for major healthcare transactions and privacy, public and private agencies based their systems on the Uniform Bill (UB-82 and UB-92) created by the National Uniform Billing Committee or the Uniform Hospital Discharge Data Set, modifying these standards to meet local information needs.[3]

Inpatient Discharge Data Uses

A statewide discharge database is a good investment. State discharge data sets are the source of consumer reports and benchmarks for quality improvement. States without discharge data may even be at a disadvantage when applying for federal health services research funds. Examples of applied uses of discharge data include the following.

Multistate Data Systems Development

Combining discharge data across states provides important national and regional benchmark information and promotes the uniformity of state data systems that have evolved independently. Twenty-seven states currently participate in the Agency for Healthcare Research and Quality's (AHRQ) Healthcare Cost and Utilization Project (HCUP). AHRQ collects statewide discharge data and develops databases, software tools, and statistical reports for public use. HCUP is a federal-state-industry partnership to build a standardized, multistate health data system.

These initiatives have resulted in the HCUP Quality Indicators and the National Inpatient Sample. The Quality Indicators provide a framework for evaluating and benchmarking inpatient data by patient and hospital characteristics, and the National Inpatient Sample is a database of more than 7 million records covering all types of patients discharged from hospitals. [4,5]

Access to Care

Because outpatient data are not readily available, inpatient data even serve as a source of outpatient studies. Ambulatory-sensitive conditions are conditions or diagnoses treated in inpatient facilities that are potentially affected by the level of outpatient care received. [6] These acute and chronic conditions may serve as proxy measures of health system "failures" (lack of primary care, insurance, and/or local medical practice standards).

Outcomes Studies

Many states generate public reports comparing the performance of hospitals and physicians for high-volume, high-cost conditions and procedures. One state agency, the Pennsylvania Health Care Cost Containment Council, has been a leader in the public release of physician- and hospital-specific quality data with its "Guide to Coronary Artery Bypass Graft Surgery" report. This report includes risk-adjusted bypass patient mortality rates for Pennsylvania cardiac surgeons, hospitals, and 34 health plans operating in the state.

The report also lists the average amount the hospitals charged, the risk-adjusted length of stay for both hospitals and health plans, and information related to the volume of procedures performed by hospitals and surgeons. Like its counterparts in other states, the Pennsylvania Health Care Cost Containment Council draws technical assistance from community advisory groups, including experts in the field, to ensure that methodologies are scientifically sound. [7]

Linkage

The linkage of discharge data with major health databases is an important practice in many state health departments. Data sharing and linkages, when authorized by state statutes and guided by detailed data use agreements, provide powerful information for program management, policy development, and population-based assessment. State agencies have developed encryption capabilities that mask and protect patient identity, turning discharge databases into statistical tools for defining episodes of care, tracking hospital readmissions, and improving data quality. The Crash Outcome Evaluation System, funded by the National Highway Traffic Safety Administration, combines morbidity, mortality, accident, and utilization data in 23 states to produce survival and injury information related to vehicle safety. [8]

Non-inpatient Data Collection

Public and private state data agencies have moved beyond inpatient data collection to include ambulatory surgery, emergency department, and physician office settings. Twenty-six states currently collect ambulatory surgery data from hospitals, and at least five states plan to collect ambulatory surgery data within the next two years (see "Non-inpatient Data Collection Practices"). Emergency department data collection will increase as well. NAHDO estimates that five states are actively developing reporting policies for this important public health data set. Other important statewide utilization data for future development include long-term, home health, and other nonacute care data.

Breakthrough Trends in Health Information

There are major forces transforming the healthcare industry; health information is at the nexus of these changes, and states are moving quickly to keep up. National standards, the national quality and patient safety agendas, and information technologies are converging to ensure progression to new data sets and improved information.

HIPAA

HIPAA imposes the technical infrastructure essential for standardization and data integration and defines a national process for the transaction of healthcare data. While there are concerns about its implementation costs, HIPAA is bringing industry, public health interests, and competitors together to seek business solutions. The Public Health Data Standards Consortium (PHDSC) is one example of HIPAA-driven collaboration. The PHDSC is a "coalition of organizations committed to the promotion of data standards for public health and health services research and brings together individuals in the state, federal, and private sector." [9]

While public agencies are technically exempt from HIPAA's transaction and code set regulations, the covered entities (data suppliers) must comply. The PHDSC and NAHDO are facilitating HIPAA education and encouraging state health data agencies to assess their HIPAA readiness and "crosswalk" their discharge data to X12N 837 institutional standards.

What will be lost if states adopt the current electronic standards? NAHDO has identified the following fields collected by state health data agencies for which national standard definitions and formats would benefit public health and research: [10]

- birth weight on newborn records
- patient identifier
- multiple E-codes (ranging from one through "all")
- race and/or ethnicity
- mother's medical record number on the newborn record
- payer type categories
- do not resuscitate order
- county code

These elements are not essential to pay a claim, but they are essential for monitoring utilization rates, assessing patterns of healthcare quality and access, and other purposes required by legislation. NAHDO is actively involved with the PHDSC and its workgroups to develop a healthcare data standards reporting guide, a document of consensus standards, and content definitions for public reporting of discharge data.

National Quality Report

The Institute of Medicine's Committee on the National Quality Report on Health Care Delivery developed a vision of a national quality report to serve as a "yardstick or barometer by which to gauge progress in improving the performance of the healthcare delivery system" in the same way that economic indicators (e.g., the consumer price index) are used to track the state of the economy and guide economic policy. The report's objectives include enhancing public awareness of quality and assessing progress in meeting national quality goals. [11]

Patient Safety Agenda

A patient safety task force was formally established within the Department of Health and Human Services to coordinate a joint effort among its agencies to improve existing patient safety data collection systems. A series of demonstration projects will be funded, and data on the Centers for Disease Control's National Nosocomial Infections Surveillance system and the Food and Drug Administration's reports on adverse events will be part of this coordinated system. [12]

The Role of the HIM Community

NAHDO encourages the HIM community to work with public and private partners at the state level to improve public health data systems. As an important player in health information and informatics, the HIM professional has a clear role in both state and national initiatives involving health information and informatics.

Here are some things individuals can do:

- **Become involved** with your statewide data collection initiatives. Most state agencies have advisory committees and welcome the perspective of the HIM professional. This participation will be especially important as state agencies expand to non-inpatient data sets.

- HIPAA is national, but HIPAA implementation is a local issue. If you have not already done so, find out who is leading **HIPAA implementation projects** in your state or region. Funding for education and training is tight, and partnerships will be the key to successful implementation. The HIM professional can present a balanced view and hopefully be a voice of reason amidst the occasional hype and hysteria associated with HIPAA.
- Public health data systems are too often fragmented, in large part due to separate federal funding streams. This categorical or "silo" funding leads to fragmented and redundant information reporting. The medical records professional is in a unique position to **bring local and public programs together** to coordinate data collection priorities.

Notes

1. *Statewide Encounter-level Inpatient and Outpatient Data Collection Activities*. Report to AHCPR, 1999.
2. National Association of Health Data Organizations. "State Health Data Organizations Survey." NAHDO, 1998.
3. Washington Business Group on Health and the National Association of Health Data Organizations. "Fostering Uniformity for Health Care Assessment Data Gathering." Final report, 1989.
4. Agency for Healthcare Research and Quality Web site, available at www.ahrq.gov.
5. Agency for Healthcare Research and Quality. *Hospitalization in the United States, HCUP Fact Book*. Washington, DC: AHRQ, 1997.
6. New Mexico Health Policy Commission. *Annual Report of 1999 Hospital Inpatient Discharge Data*. NMHPC, 1999.
7. Pennsylvania Health Care Cost Containment Council Web site, available at www.phc4.org.
8. National Highway Traffic Safety Administration. "Crash Outcome Data Evaluation System." Available online at www.nhtsa.dot.gov/people/ncsa/codes/DataNetwk.htm.
9. Public Health Data Standards Consortium Fact Sheet, 2000. Available online at www.cdc.gov/nchs/otheract/phdsc/phdsc.htm.
10. "Prioritization of Data Needs for State Encounter Data Sets for Public Health and Research Applications: A Summary Report to the Public Health Data Standards Consortium, National Association of Health Data Organizations." 2000.
11. Institute of Medicine. "Envisioning the National Health Care Quality Report." Available online at www.nap.edu/catalog/10073.html.
12. Patient Safety Data Collection Summit, April 23-24, 2001. Available online at www.ahcpr.gov/qual/taskforce/psagenda.htm

Statewide Inpatient Discharge Data Collection

Statewide Discharge Data Collection Practices

Non-Inpatient Data Collection Practices

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