Supporting quality improvement and surveillance registries

Submitting clinical process and outcomes data to regulatory agencies, professional societies, and national registries can be an onerous task for a healthcare system whose primary function is patient care. Such data usually reside in numerous systems in a multitude of formats, and extracting, reconciling, and re-entering them in a standardized fashion can be extremely time-consuming and error-prone. In August 2007, testimony presented to the Ad Hoc Workgroup for Secondary Uses of Health Data of the National Committee on Vital and Health Statistics reported an almost doubling of administrative costs due to increased reporting requirements for quality-related data collection.

As a member of the National Surgical Quality Improvement Program (NSQIP), the Duke University Health System (DUHS) reports data on 40 selected surgical cases per week, or roughly 2,000 cases per year. As a designated Level 1 Trauma Center, it also reports more than 300 data elements for each trauma encounter processed in its emergency department to the National Trauma Data Bank (NTDB).

Fortunately, the health system’s consistent use of informatics to closely integrate patient care with quality improvement programs alleviates its data collection burden. Through the Decision Support Repository (DSR), DUHS enables the systematic acquisition of information related to every patient encounter in each of its three hospitals and approximately 116 clinics. The DSR stores standardized clinical, financial, and operational data extracted from more than 100 health information systems at DUHS (see page 14). Operational since 1996, it now contains records on more than 3.8 million patients and 24 million encounters.

The NSQIP and NTDB registries receive data directly from the DSR. If the DSR does not contain a required data element, Duke staff will manually populate the data field. Much of the data submitted to the NSQIP comes from the patient admission-discharge-transfer (ADT) system, the surgical scheduling system, and the anesthesia system. For the NTDB, data are collected from the emergency department system, the financial system, and the ADT system.

The Duke Tumor Registry

Duke also reports data to the North Carolina Central Cancer Registry (CCR) in compliance with state reporting requirements to support cancer detection and improvement efforts.

Twenty-three types of cancer are monitored by the CCR. It easily obtains the data it needs from the Duke Tumor Registry, which collects cancer data at the time of diagnosis or when cancer care is provided by Duke clinicians. Managed by the Duke Comprehensive Cancer Center, the Tumor Registry has collected data on more than 100,000 cases since 1990. It also supports administrative planning and marketing, the development of cancer support programs, and research activities.

Without the DSR and Tumor Registry, significant manual labor would have to be employed to meet national and state reporting requirements. As it is, the NSQIP and NTDB have seen a significant decrease in manual data entries and errors since the implementation of the DSR. These organizations are also able to collect data that had previously been unavailable to them due to limited human access. As for Duke, the need for additional staff to keep up with reporting deadlines has been eliminated.