

## **Peter Lannon, research scientist, NYS Department of Health Robert Pennacchia, Data Processing Technical Services manager, NYS Department of Health**

The NYS Department of Health's (DOH) Medicaid Managed Care Encounter Data System (MEDS) is the product of the department's decision to require mandatory enrollment of Medicaid recipients into managed care plans. Peter indicated that statewide enrollment in managed care plans is expected to grow from about 650,000 members to 2.2 million over the three-year implementation phase. The partners in this project, including the Department of Health, county departments of social services, managed care plans, and oversight agencies, all have a vested interest in using information about the plan and its enrollees for evaluation and decision making purposes. Peter discussed how these organizations each need a variety of information to monitor service utilization, access to care, and the quality, appropriateness, and continuity of care for enrollees. The need for all this information led to the development and implementation of MEDS.

The data for the system is collected by assorted methods, such as through workshops, satisfaction surveys, on-site reviews, and clinical studies, in an integrated approach. Peter detailed some of the data collected: encounter type, provider and member identification, date of service, diagnosis, treatment provided, and Medicaid claims. When creating MEDS, Peter said the department had to consider issues like how to store the data, what methods to use to retrieve information quickly, and how to provide access to the data to a variety of users with diverse information needs.

Robert discussed the development of MEDS, which began about two years ago, and the solutions DOH came up with to deal with these data issues. The first solution was to establish a data warehouse that would get all the data logically linked and contained in one place. The warehouse architecture includes ad hoc query functions, which have proven to be the fastest way to get customized information out of the repository. The department also chose to include a decision support application. "We wanted to provide managed care organizations with a more controlled environment where they could have most of their questions answered. We also wanted to provide this through Web access," Robert said. The resulting Health Provider Network is an Intranet application that allows the various managed care plan partners to access information. Through the use of ad hoc query and OLAP (online analytical processing) tools, MEDS provides extensive results with manipulation and reporting functionality.

Robert detailed the kind of requirements and skill sets that were necessary to create and implement these solutions.

- The department had to encourage collaboration between system designers, developers, and programmers, as well as between program managers and information users.
- Those involved also performed careful assessments of the business requirements of the system.
- System development managers were required to work on their communication and facilitation skills in order to develop expertise in user business, clearly articulate business questions and requirements, and translate business needs into technical specifications.
- Business and program managers needed to develop analytic skills, for identification of business questions and relationships between data elements, and communication skills, in order to teach the business side of things to the technical staff.
- Users needed to develop their general PC skills, including Windows operation, file management, Internet browsers, and print menus.

Other sets of skills were necessary in order to use the information housed in MEDS. General analytical skills -- such as understanding the available data and formulating questions -- were required. Intermediate analytic skills -- necessary to work with spreadsheet applications, calculate rates, and present information -- were also required. Advanced analytic skills -- involving relational database queries, relational data model development, and using SQL (structured query language) -- were also necessary.

The development and deployment of the Department of Health's MEDS program created an opportunity for the business and program managers to share skills and information with the technical team members. The groups worked together, mentored each other in their areas of expertise, and created a good system to track, assess, and manage the state's Medicaid managed care plans.