Lessons Learned from a Registration Redesign

by Kathy Berger

When days in accounts receivable and/or patient complaints increase, it is common for many healthcare organizations to blame their information systems (IS) and seek to acquire new software. At Good Shepherd Hospital (GSH), in Barrington, Illinois, a part of the eight-hospital, Chicago-area Advocate Healthcare (AHC) system, problems with patient scheduling and registration were raised with Bruce Smith, AHC's chief information officer (CIO). Smith found an uncommon solution to solving these problems: he spearheaded an initiative to examine the work processes *before* embarking upon a costly, and possibly frustrating, change in IS software. As a result, instead of purchasing new software, solutions involving staffing changes, process redesign, and rebuilding of the existing scheduling system were used to improved the processes.

GSH's central scheduling department was problematic. Patient calls were not being answered, physicians were instructing their patients to arrive at the hospital without appointments because they could not get through on the phones, and patient and physician complaints were increasing exponentially. A project steering committee composed of selected GSH department members and objective, outside consultants was formed to assess the hospital's patient-registration processes and make recommendations for improvements.

Investigating the Scheduling/Registration Process

The preregistration of accounts and scheduling of procedures and visits were both the responsibility of the scheduling staff. The GSH main lobby was full with patients waiting to be registered. Affected by employee turnover and leaves of absence, central scheduling had only two staff members answering the phones. An outside agency had been retained to take calls and leave messages for the existing scheduling personnel, who would return the messages and schedule patients in this manner. These staff members could barely keep up with scheduling, and no preregistration was taking place at all.

The first step in the process assessment was to collect statistics: wait times in outpatient registration, percentage of preregistered patients to scheduled patients, scheduling phone calls answered, number of abandoned incoming calls, abandoned calls as a percentage of the total calls, and similar information. These data became the starting points from which to benchmark future improvements to the process.

Several subcommittees were formed to investigate process components and strategize and implement improvements. The preregistration subcommittee was charged with helping the hospital achieve 100 percent preregistration of centrally scheduled patients and, eventually, 100 percent of all scheduled patients, including those not scheduled in the scheduling system. They were assisted in this task by the communications subcommittee, which was charged with designing vehicles of communication to physicians, patients, and staff regarding the progress of improvements, and the future-technology committee, which looked at the effectiveness of the current scheduling system and suggested possible improvements and upgrades. In addition, the GSH CEO held meetings twice a week to address progress in getting central scheduling staffed again.

Central scheduling was a difficult area to move existing staff into from other hospital departments because the scheduling system was difficult to teach and learn. After observing staff duties, it was determined that the scheduling system had not been maintained over the past several years because of turnover. Staff had to consider as many as 12 detailed sheets of exceptions before scheduling a particular test in the system. The scheduling criteria, such as staff and physician availability, room availability, and equipment needs, had to be built into the system to transform the system from a glorified calendar to a true scheduling system.

An IS employee with scheduling system expertise immediately was dedicated to rebuilding the system. Departments were required to document the criteria needed to schedule a test so staff could immediately "see" when the next available test could be scheduled. Another subcommittee was formed to develop procedures for ongoing maintenance and support for the scheduling system.

Results of the Process Redesign

Over the next several weeks, central scheduling was again fully staffed, training was completed, and the system was well on its way to serving as the tool it was intended to be. Central scheduling personnel were handling all the calls themselves, the services of the outside agency were discontinued, and the percentage of incoming calls that patients abandoned before a scheduler could answer dropped from

46 percent to 22 percent within six weeks. At the same time, total outpatients increased by 1,659 (33 percent), from 4,983 to 6,642. In addition, total calls received by central scheduling decreased from 4, 444 to 1,863, which meant that patients were serviced on the first call. Unaccounted-for calls in central scheduling decreased from 2,406 per month to 721.

Establishing a preregistration area while scheduling was being "fixed" was an equally important priority because patients were waiting 13 minutes on average to be registered in the outpatient center, causing congestion in the main waiting area. GSH committed to hiring three full-time staff members to perform this function. The cost of hiring these three staff members was absorbed into the budget of the redesign to make the change budget-neutral. Wait times for registration of walk-in (nonscheduled) patients decreased from 13 minutes to under 6 minutes in two months. Meanwhile the number of walk-ins during this time increased substantially, from 2,347 per month to 3,297 per month.

Reassigning preregistration duties from the scheduling staff to the preregistration staff increased overall accuracy and productivity. Registration errors decreased from 35 percent to 26 percent and the percentage of preregistrations to scheduled patients increased from 54 percent to more than 80 percent in two months.

Hospitalwide Changes

Having resolved the immediate problem, management at GSH began to look at the entire front-end process for each classification of outpatients entering the hospital. Through flowcharting, it was discovered that the registration process had become very fragmented. Different mechanisms were in place for scheduling and registering patients based on the services they received. Many ancillary areas did their own registrations because they did their own scheduling. Some patients went directly to the servicing area, and some went through the outpatient center where they waited for a registrar even if they were preregistered.

This fragmentation caused a lot of patient confusion and frustration. Hospital personnel had difficulty directing patients to their first point of entry. The inpatient admitting process also had become very fragmented, with urgent admissions being directed to the admitting office, or if admitting staff were not available, the emergency department.

As a result of this comprehensive overview of the entire front-end process, the complete centralization of registration became the primary focus. All patients currently are directed to the central registration area. If they are preregistered, guest services personnel obtain signatures and a copy of the insurance card at the front desk, and patients are directed to their service area. If a patient is not scheduled, and therefore not preregistered, the registration process is completed in the central registration or patient intake area.

Reporting structure changes were the last step of the redesign process. Preregistration and registration are a combined function of the central and emergency department registration staff, and all report to the same supervisor. This central reporting structure allows for flexibility in reallocating staff to an area that needs assistance during peak times.

When computer system users say "the system doesn't work," perform the following analysis:

- Begin an issues list and investigate each item placed on the list.
- Determine if turnover and training is an issue. If so, find out why.
- Determine whether the system setup supports automation, and whether the flow of data continues without waiting for manual intervention.
- Check to see if the setup of the system supports the norm with reports to monitor the 20 percent of exceptions.
- Determine whether the system is set up so that data-entry errors are minimized.
- Review the reports produced by the system. Observe how they are used.
- Gather statistics and report on them daily. Use them as a report card to measure change.

Conclusion

This project illustrates that any information system is only as good as the work processes that it supports and that it may be valuable to review those processes before embarking on changes or upgrades to IS systems. The unique approach the AHC CIO took led to a data-gathering and process redesign that has provided more convenience to patients. Paperwork was streamlined and redundancies eliminated. Ongoing benchmarking serves as the report card to measure what is working and identify what is not. This experience also provided GSH with the tools to enhance this process at their new outpatient facility.

It is important that the scope, purpose, and goals of the project be clearly communicated to staff, and that their concerns, including possible change of staffing or staff responsibilities, be addressed upfront. Also important for administrative and staff support is following a sequential process from assessment, to strategic decision-making, to implementation and staff education. ♦

About the author

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