

Decimating Duplicates

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by Lynne Gentry and Patricia A. Harnish, RRA

After approximately 150,000 (out of 787,000) medical record numbers in a master patient index (MPI) were identified as possible duplicates, MultiCare Health System in Tacoma, WA, decided to address the problem through a multidisciplinary approach. An MPI conversion to a new hospital information system, followed by the decentralization of the admitting department, led to the increase in duplicate medical record numbers. And an influx of managed care insurance plans within the state made registration, performed by the nursing units, even more complicated than it already was.

MultiCare includes a medical center comprising two hospitals, 34 outpatient clinics, 17 lab sites, and two day surgery centers for adults and children. A third, off-campus hospital with 32 physician locations, nine clinics, eight urgent care centers, three day surgery centers, and two physician residency family practice centers is also part of the organization. The medical center and the off-campus hospital depend on the hospital information system (the other sites work from another system).

To address the issue of duplicate medical record numbers, two multidisciplinary teams were formed. One team developed recommendations while the other addressed the actual implementation of those recommendations. The ultimate goal, as defined in the project mission, was to "design a process to establish and maintain the integrity of the medical record numbering system." Representatives from various departments made up the teams: nursing administration, patient financial services, lab, radiology, patient registration, emergency departments, HIM, IS, and operations improvement.

Actual team participation on the project continued for 10 months, during which several new processes and policies emerged:

- an education plan was implemented to increase awareness of employees who are responsible for creating a patient registration
- standard registration questions were developed as a resource
- a monitoring plan was designed to provide communication between system users, management, and the HIM department
- a "clean up" plan was developed to manage existing duplicate records
- a plan was established to eliminate any new duplicate numbers as they arise

The IS department provided the daily information of duplicates created for the monitoring process, the duplicate information needed for the three merge phases, and the knowledge and skills to conduct the merge process.

The most time- and labor-intensive components of this project were the identification and actual merge of duplicate numbers in the hospital information system and the physical chart consolidation. The IS and HIM departments worked closely to identify and merge duplicate medical record numbers.

The Moment of Truth

In the end, 77,000 duplicate record numbers were eligible for the first round of merging—the automatic merge process. Once this was completed, we switched to a rapid merge process—in which the system would automatically merge numbers based on specific, matching demographic elements—to further reduce the number of duplicates. Finally, a manual merge process wrapped up the remaining duplicates. Temporary, part-time staff was recruited from the ART class at the local community college to perform the manual search and merge of remaining duplicates. The process is ongoing for those records not easily matched, and current duplicates are handled through the quality assurance process between IS, registration, and HIM. To keep up with the duplicates, we continue to hire the part-time staff to research duplicate files, a task that includes requesting previous records from storage for comparison with the current ones. The permanent staff works on current duplicates and manages other aspects of this project.

Continuing the Legacy

This work, which began in 1996, continues to tackle existing duplicate numbers. A list generated by the IS department contains all of the possible duplicate numbers that exist in the system. The temporary staff then verifies the possible matches and researches patient demographics if any doubt remains as to the match. Then all existing duplicate numbers in the system are merged once it is confirmed that duplicates exist.

At this point, we check to see if any existing patient charts are still missing from the permanent patient file. If none are found, we file the chart as complete. If charts are found, we conduct further research of other possible duplicate numbers to find any existing charts. Once this is complete, the final merged medical record number in the system becomes the permanent identifier for that patient's file. The appropriate departments are notified of the new number.

In a decentralized registration environment, where almost 1500 employees may create medical record numbers, this process has increased awareness and decreased duplicate numbers. Had this process not been implemented, the system could have held more than 160,000 duplicate numbers by 1998. Instead it averages 30.7 duplicate numbers per month. The average number of new registrations created per month is 24,843.

Awareness of this issue—and achievement of such results—could only have come about through the combined efforts of the medical center staff. Three years after the process began, a commitment to the integrity of the medical record number remains strong. Utilization of the education, monitoring, and clean-up plans demonstrate the effectiveness of the multidisciplinary approach.

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