



Why Automate Cancer Case Identification?

Case identification is central to cancer data collection. It is the first step in establishing a cancer database and an integral piece in complete acquisition of cancer cases for both hospital and population-based cancer registries.

Historically the method used to perform the bulk of case identification has been to review printed or online pathology reports and Health Information Management Admit, Discharge and Transfer (ADT) reports. Each of these sources requires a manual check of the potential cases against the database followed by hand coding of information from the report to “suspend” the case for later completion. This manual review and initial entering of cases is labor intensive. Depending on how source reports are provided to the cancer registry, the staff time of pathology, HIM and other departments may be consumed in the effort to identify all cancer cases within an institution.

The many recent advances in the electronic exchange of information, including pathology systems, EMRs and information exchange standards, makes the process of manual report generation, review and initial data entry of suspense cases obsolete. Automated case identification and importation of data into a database takes full advantage of electronic resources available and reduces the time and labor expended on this primary step in cancer data collection and reporting.

The University of California, San Francisco Experience

In 2006, the cancer registry at the University of California San Francisco Medical Center added automated pathology case finding to their existing CNExT system. The time and cost savings realized by using the Cancer Alert System (CAS) for case identification were immediately evident. Ann Griffin, PhD, CTR, Cancer Registry Manager at the UCSF Medical Center Comprehensive Cancer Center, conducted a study of their automated pathology case finding process using 2006 figures to determine the amount of savings. The cancer registry staff there was manually reviewing over 12,000 pathology reports per year. The table below illustrates the time and cost savings seen by UCSF Medical Center by introducing the CAS automated case finding system.

Manual Case Finding Procedure (annual)	Staff hrs /Cost Savings with CAS (annual)
Pathology Dept. staff initiating reports for registry - 26 hrs	0 hrs/\$650.00
Registry staff review/sort reports -808 hrs	404 hrs/\$10,100.00
Manual suspension of cases in registry database – 260 hrs	0 hrs/\$6,500.00
Report consult only/outside slides to central registry – 145 hrs	0 hrs/\$3,625.00
Total staff hrs for manual method: 1,237 hrs	Total staff hrs/cost savings: 833 hrs/\$20,875.00

Although the time and cost savings for institutions will vary depending on factors such as manual case finding procedures in use, state reporting requirements, and variations in salary, the study clearly indicates that the savings in implementing the CAS system can be significant to a cancer registry’s operating budget.

The Ochsner Health System Experience

A second important source that factors into the thoroughness of cancer case identification is the ADT report generated by HIM systems. Automating this piece of the process can further eliminate unnecessary manual processing of case sources and further the time and cost savings benefits.

Ochsner Health System, based in New Orleans, Louisiana, has been using an automated case finding system for several years. Ochsner Health Systems sees over 2,000 new cancer patients each year and up to 5,000 ADT records with cancer related diagnoses are generated each month. While an official cost and time benefit study has not been performed, Cynthia Boudreaux, LPN, CTR, Manager of the cancer registry, feels certain that her registry staff would never be able to manage the case finding volume at Ochsner Health without automation. More recently, Ochsner Health System switched from their older cancer registry system to CNExT with CAS, which features a more sophisticated filtering process for cancer related diagnostic codes. With their new CAS system in place, the cancer registry staff has identified about 100 new cases for 2008 that would have been missed using the old system.

Other Benefits of Automation

In addition to saving staff time and financial resources, the automation of the case finding process using CAS promotes concurrent case identification making it possible to use the cancer registry database as a source for early identification of patients for entry into clinical trials. Thus, the cancer registry data can contribute directly to the quality of patient care.

"The new CAS system not only brought our timeliness back up to CoC standards, it only took a month to implement and see the cost-saving effects in our new case finding procedures!"

Beverly Villemuer
St. Tammany Parish Hospital
Covington, LA

With advances in electronic medical systems and the exchange of health information, the automation of data acquisition is a concept whose time has arrived. For cancer registries, automated case identification is the first step in the process of automating data acquisition overall. The list below summarizes the known benefits of automated case identification today. As electronic health systems advance further, more benefits will surely be realized with additional automation of data acquisition.

Benefits Derived From Automated Case Identification

- Eliminate paper waste produced by printing out hard copy reports and the time spent handling those reports
- Reduction in usage of resources in report generation
- Eliminates manual look-up of potential cases against existing cases in the database
- Reduction in manual data entry by utilizing automated population of fields such as name, medical record number, address, Social Security number, specimen number, etc.
- Increased data accuracy due to reduction in manual entry
- Increased completeness of case reporting and reduction in "missed" cases
- Automated updates of follow-up information on existing cases
- Early identification of potential clinical trials participants

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