

# Automating Critical Test Results: Saving the Radiologist's Time

## duPont Case Study

### Site & Department Background

#### Alfred I. duPont Hospital for Children

- Location: Wilmington, DE
- 200-bed teaching hospital integrated with Nemours Children's Clinic staff and facility
- Academic Affiliations: University of Delaware and Thomas Jefferson University
- Named one of the nation's 25 Best Children's Hospitals by Parents Magazine
- 84 pediatric specialists named to Best Doctors in America

#### The Radiology Department

- 8.5 Full-Time Equivalent radiologists
- 65 radiologic technologists
- Total staff of approximately 90
- Performed 92,000 exams in 2009
- Approximately 100 CTRs/mo

#### duPont Children's Other peerVue Automated Workflows

- Resident Over Reads
- Teleradiology Over Reads
- Peer Review
- Technologist Quality Improvement

### Manual CTR Workflow: "A Painful Process"

Joint Commission National Patient Safety Goal #2 requires that hospitals gather and report Critical Test Results (CTR). Director of Radiology, Annie Baker, notes that, "We've always worked hard to communicate Critical Test Results. Hospital policy requires that all CTRs require physician-to-physician communication. Before we implemented peerVue, the radiologist tracked down the ordering physician, communicated findings, and documented the communication."

Her staff then compiled the monthly CTR report by conducting a free text search in the RIS to identify CTR studies. Although Baker attempted to implement uniform search key words to be used only for CTR cases, the radiologists often used the same terms in other non-CTR contexts. Thus, a data analyst had to evaluate each search result to determine if it was a true CTR case, which required several hours each day.

After creating and populating a spreadsheet with the results, the analyst then entered the turnaround time (TAT) for each CTR case, also a Joint Commission requirement. To do so, the analyst cut and pasted the individual data from each study from time of the diagnosis to physician contact. As Baker says, "It was a painful process. We were never done on time."

*Baker says, "peerVue closes the loop on our CTR workflow, facilitates delivery of incidental findings, and the reporting process is now a breeze. When I need a CTR report, I just pull it up and print."*

### Automating the CTR Workflow

Integrated directly within their PACS, peerVue includes a workflow for CTR and Incidental Findings as a "Best Practice Solution Space". To report a CTR in the system, the radiologist right-clicks in PACS and selects the peerVue menu item to launch the Critical Results Space. Within peerVue, the radiologist simply picks the appropriate diagnosis from a pull down menu. The web-based peerVue solution automatically records the time of the diagnosis and when the radiologist records reporting the CTR to the ordering physician.

The hospital categorizes incidental findings into two categories, Major and Minor. When a radiologist identifies an incidental finding (major or minor), peerVue automatically transmits the notification to the staff worklist in real-time to contact the ordering physician. For major incidentals, the staff person establishes contact and transfers the ordering physician to the radiologist. In both cases, efficient use of staff and peerVue saves radiologists' time.



Annie Baker, Director of Radiology



Alfred I. duPont Hospital for Children

peerVue also communicates the CTR report by email or fax to all designated recipients.

Data gathering is now very easy in the automated CTR workflow since the department relies on the times recorded in peerVue to calculate the required TAT reports. As a result, Baker has reassigned the data analyst who formerly spent several hours per day combing RIS text files to other tasks.