



UW HEALTH TRANSPLANT CASE STUDY

Extract's solution decreases the time from over two weeks to 12 hours (or less), for comprehensive data to get to their electronic medical records.

extract 

EXTRACTSYSTEMS.COM

ACHIEVING COMPREHENSIVE LAB DATA IN THE PATIENT RECORD JUST GOT EASIER.

BACKGROUND:

The UW Transplant Program is part of the University of Wisconsin Health System. UW Health serves over 618,000 patients each year in the Upper Midwest and beyond. They are a leader in patient care and are continuously seeking ways to optimize patient success. The UW Transplant Program has been serving patients worldwide for 40 years, offering a large range of services including kidney and live-donor kidney, pancreas, liver and live donor liver, heart, lung, heart/lung, intestine, multiple organ, islet cell and pediatric transplant services. Latest statistics show that UW Transplant has performed more than 12,000 transplants.

Challenges:

VOLUME OF UNSTRUCTURED DOCUMENTS:

UW Transplant programs receives 250,000 pages of external lab results every year. Having data filed discretely in the EMR is the best way to track and trend data, while ensuring physicians can see how a patient is doing over time. Because of their high volume of incoming faxes, UW Transplant was struggling with a large backlog.

TURNAROUND TIME:

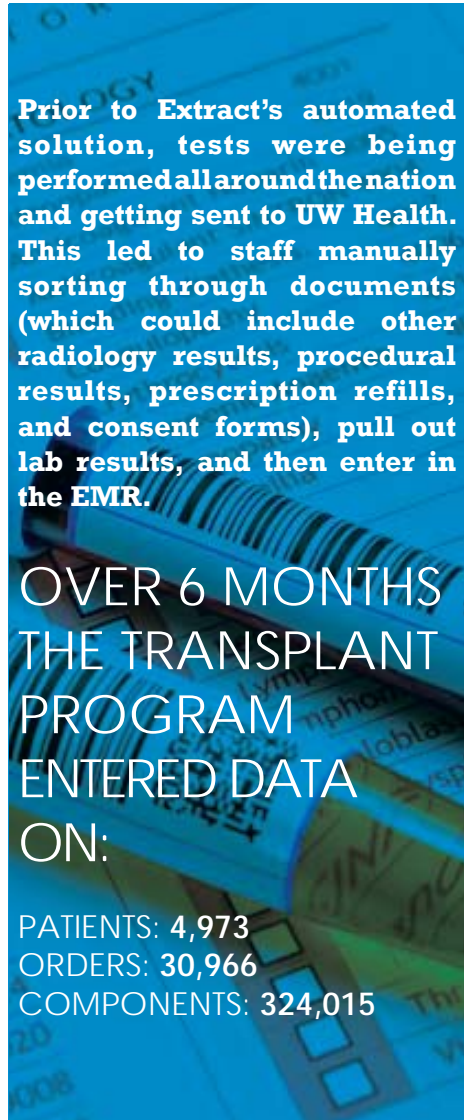
Providers expect a quick a turnaround time of these results. UW Transplant realized that scanning documents and manually entering results took too long. Staff was ill-equipped to keep up with the demands of sorting through various document types sent to them including radiology results, procedural results, prescription refills, consent forms, and lab results. Once lab results were separated from all the other paper, there was still the overwhelming manual task of entering data for 1,000 pages every day. After entered, the original document would be routed to be scanned into the EMR and Document Management System. Scanning took an additional two. It was clear to everyone that a better solution was required.

ERRORS:

UW Transplant manually entered patients' clinical lab results into the EMR before and after transplant. Manual entry takes a great deal of time, but also increases the incidence of risky data errors. Data accuracy is critical to UW Health, and Extract's workflow and reporting tools provide management and clinical decision makers confidence in the data.

THE EXTRACT ADVANTAGE:

Extract uses advanced data capture technology that is designed to automate the collection, separation, sorting, queuing, and reviewing of documents and the valuable data they contain so that it can be entered into the EMR quickly and accurately. Extract's unique intelligent algorithms can read a document similar to a human and does not need to know the format of the document in advance.



Prior to Extract's automated solution, tests were being performed all around the nation and getting sent to UW Health. This led to staff manually sorting through documents (which could include other radiology results, procedural results, prescription refills, and consent forms), pull out lab results, and then enter in the EMR.

**OVER 6 MONTHS
THE TRANSPLANT
PROGRAM
ENTERED DATA
ON:**

**PATIENTS: 4,973
ORDERS: 30,966
COMPONENTS: 324,015**

UNTIL NOW, ERROR-PRONE MANUAL DATA ENTRY WAS THE ONLY METHOD FOR MOVING THIS EXTERNAL DATA INTO THE EMR.

Challenges Solved:

AUTOMATED HANDLING OF HIGH VOLUME UNSTRUCTURED DOCUMENTS

By automatically “sweeping up” incoming faxes, identifying them as Lab and Non-Lab documents, the Extract solution greatly reduced staff time spent retrieving and sorting faxes and automatically queued laboratory results for processing.

REDUCED TURNAROUND TIME GETTING DISCRETE LABORATORY RESULTS INTO THE EMR

The Extract solution uses information from the incoming fax to match patient and physician data in their EMR. It automatically extracts over 80% of the laboratory test codes, results, units of measure, reference ranges, and flags, 100% correctly. All possible data is pre-validated before presenting for review. Once reviewed and saved, the data flows immediately into their EMR as discrete data, and their original document is stored in their document management system and linked to the discrete results in their EMR. UW Transplant now see results in the EMR within a few hours and priority patient results within one hour.

REDUCED ERRORS

UW staff no longer relies on manual data entry. Instead, they review what the Extract Platform extracted from the fax and presented to them. All the patient and physician data is matched, and the extracted data has been pre-validated, so any possible errors are immediately apparent to the reviewer. In addition, the user interface is designed to minimize looking back and forth, helping to ensure errors are spotted. UW staff then acts as Quality Assurance personnel instead of data entry personnel.

ADDITIONAL BENEFITS

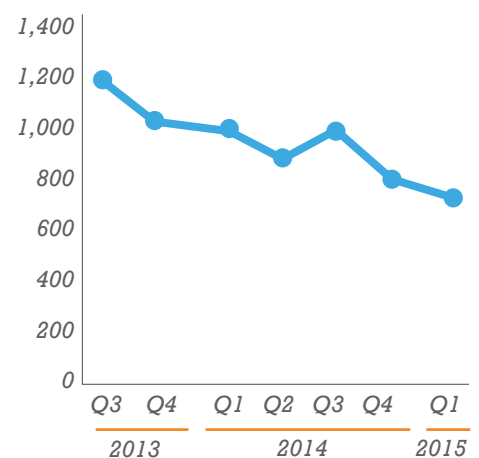
At the time of implementation, Extract worked closely with the UW Transplant team to maximize efficiency by streamlining workflows, reducing paper, and reducing data entry errors.

Overall Results:

Extract has increased UW Transplant’s data entry speed by 80%. Their backlog has been reduced, and test results can easily be located by physicians in their Epic EMR in just over 12 hours. Priority patient data can be located in the EMR within an hour.

UW TRANSPLANT IS ENTERING TESTS 80% FASTER AND ARE STILL IMPROVING. THEIR BACKLOG IS SMALLER THAN EVER, AND TEST RESULTS ARE IN THE EMR IN JUST OVER 12 HOURS. PRIORITY DATA IS IN THE EMR WITHIN AN HOUR.

TOTAL HOURS SPENT:



Benefits:

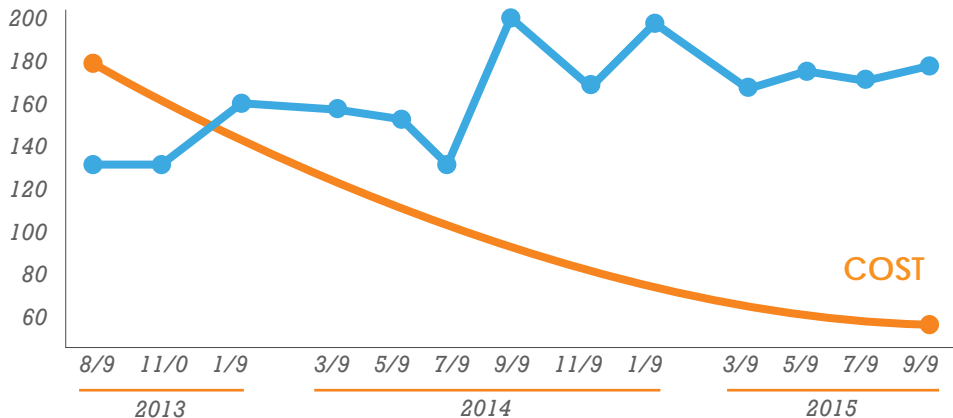
The University of Wisconsin Transplant Program uses Extract to automatically capture and move external lab results into their Epic EMR. Extract was able to help the University of Wisconsin Transplant Program achieve its data management, patient care, and productivity goals by analyzing workflows and repetitive manual processes. UW's workflows were optimized by:

- Automating the process of classifying documents coming into the fax server and routing them to the appropriate workflow
- Separating multi-patient documents from one another
- Supporting MU Stage 2 attestation for structured lab results
- Easily search and find one patient's results
- Eliminating paper and scanning
- Making lab results available to providers fast, especially priority patients
- Reducing data entry errors
- Creating streamlined and auditable workflows
- Providing data required for wait list management, compliance, and reporting purposes

*EXTRACT
HAS NOW
EXPANDED
INTO OTHER
PARTS OF UW
HEALTH.*

The chart below illustrates the amount and data that the UW Transplant Program is able to enter on an hourly basis as well as their cost savings.

TESTS ENTERED PER HOUR:



Future Plans:

Post go-live, UW identified new workflow improvements that would enhance patient care. For example, after the workflow was streamlined, the problem of duplicate results became apparent so Extract designed and deployed new functionality to alert reviewers that a lab result is a duplicate and allows them the easily manage them.