

## Custom Application Reduces Medication Loss at Children's Hospital of Pittsburgh

### Situation

Until 2014, [Children's](#) lacked a means of tracking the distribution and delivery of medication to caregivers or remote stations within the hospital. An order for medication would be placed, then reviewed and approved, and sent out for delivery.

A medical delivery technician (MDT) would pick up the medication and either place it somewhere or give it to a staff member. There was no way of logging the actual delivery, however. With no verification, often times leading to misplacement, loss and confusion. The lack of a comprehensive system resulted in loss of time, money and resources which hindered efficiency.

### Goal

Pharmacy Manager Jeff Goff envisioned a system to track the delivery of medications within the hospital. This new system would operate like the package delivery services we know, but for pharmacy deliveries within the hospital. The goal was to increase the number of successful deliveries and improve the pharmacy's service. Data Warehouse Consultants (DWC) helped him achieve this vision by creating an integrated system for medical delivery personnel and staff to track and confirm the proper delivery of medications.

### Results

This technology revolutionized the business process of Children's internal pharmacy. It has allowed the hospital to notably improve operations, diminishing drug loss and boosting service. Immediately after implementation, the misplacement of medication was reduced by **40 percent** and remained at that level ongoing.

The hospital has significantly reduced the time searching and/or replacing important medication. Using the application allows staff and caregivers to focus on the quality of care Children's provides. Additional benefits include:

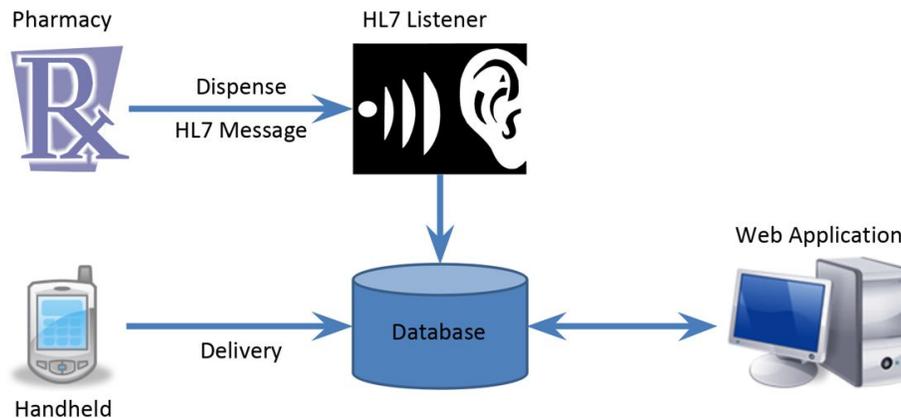
- A definitive starting point to begin looking for lost medication;
- A decrease in the number of calls made by nurses to the pharmacy to find medications or to replace missing medications; and
- Superior insights and analytics resulting from the ability to capture improved information.

### Strategy

The solution we implemented uses a mobile application to tie into the hospital's existing EMR messages. A database records dispenses and deliveries, and makes the correct matches. As a side benefit it determines which dispenses are pending delivery and the duration between the

order and the delivery. This information is carefully displayed on a custom web application available to everyone within the pharmacy.

The handheld device allows MDTs to scan the location or badge of the individual to whom the medication is delivered at the time the delivery is made. This crucial step completes the pharmacy's life cycle of medication orders and more importantly, constructs an audit trail.



## Conclusion

[Data Warehouse Consultants](#) has the capability to help you with the performance of your internal pharmacy and solve the issue of medication loss. DWC can customize and modify applications to meet the range of needs that often occur. This is not a product but rather a customized solution that can fit into any hospital environment.

## Background

Founded in 1890, UPMC Children's Hospital of Pittsburgh has been "a leader in the treatment of childhood conditions and diseases, a pioneer in the development of new and improved therapies, and a top educator of the next generation of pediatricians and pediatric subspecialists" (About UPMC Children's Hospital of Pittsburgh). Children's values of quality and safety, dignity and respect, caring and listening, responsibility and integrity, and excellence and innovation allow the hospital to constantly put their patients and families first.

Its values and guiding principles provide the foundation for Children's to accomplish its mission of "improving the health and well-being of children, teenagers and young adults through excellence in patient care, teaching, research and advocacy" (About UPMC Children's Hospital of Pittsburgh). This outlook has allowed the hospital to receive a total of 11 awards and accomplishments.