Collaborative Benchmarking
To Improve Patient Medication Safety

Lincoln Community Health Center (LCHC) is a federally qualified health center (FQHC) located in Durham, NC. The center serves as a primary care medical home to nearly 30,000 patients at eight Durham sites. Located within the main LCHC clinic is a full-service pharmacy, provided as an in-kind service by Duke Regional Hospital, which is part of the Duke University Health System. In 2015, the LCHC Pharmacy served nearly 13,000 patients, filling nearly 200,000 prescriptions.

LCHC is a member of the North Carolina Community Health Center Association (NCCHCA). The NCCHCA offers many clinical programs and services to its member organizations, including participation in clinical workgroups. The LCHC Pharmacy participates in the NCCHCA Pharmacy Directors Council workgroup which offers a place for pharmacy directors to network and share concerns and best practices.

Maintaining patient safety is a primary focus of the Pharmacy Directors Council. In 2006, Council members recognized the potential value of tracking aggregate pharmacy data as a way to identify and modify or prevent pharmacy-related quality of care issues, including medication errors and near misses. While the practice of tracking quality indicators or benchmarking was common in the hospital pharmacy setting, there was no knowledge of the practice in the outpatient pharmacy setting.

Building on patient safety experience

The LCHC Pharmacy is an acknowledged leader in improving patient safety and the medication use process having earned four Health Resources and Services Administration (HRSA) awards.

Additionally, the Medication Error Reporting, Tracking and Prevention Program at the LCHC Pharmacy has been quantifiably successful, earning recognition by both The Joint Commission and the American College of Clinical Pharmacy. This program consists of multiple components including adverse drug event reporting by pharmacy staff, providers and patients, tall man lettering (the practice of writing part of a drug’s name in upper case letters to help distinguish sound-alike, look-alike drugs from one another), the use of root cause analyses of medication errors, failure mode and effects analyses to

MODELS THAT WORK

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prevent medication errors, patient and provider education, development of safe medication processes and ongoing quality assurance activities to ensure compliance.

The LCHC Pharmacy pursued benchmarking of medication errors and near misses as a natural progression in improving medication safety. While the LCHC Pharmacy saw the value in tracking medication errors and near misses in its own facility, it also recognized the expanded opportunity to enhance medication safety for a broader population if it joined with other benchmarking partners. To find those partners, the LCHC Pharmacy turned to its colleagues on the Pharmacy Directors Council.

Getting started

The benchmarking initiative kicked off in late 2006. The LCHC Pharmacy was joined by five other community health center pharmacies from across the state. While the concept of benchmarking medication errors with partner organizations sounded straightforward, in reality a number of practical issues needed to be addressed.

First, each partner organization assigned a benchmarking champion at their respective sites. This champion would be invaluable to both initiate and maintain benchmarking activities.

Second, all partners needed to agree upon the definition of a medication error and a near miss. Council members relied on published definitions as a starting point with adjustments made to fit practice needs.

Third, the team developed a tracking and reporting system to capture the data. The diversity of the partner organizations required a simple system that could be easily incorporated into daily workflow.

Collecting and reporting data needed to serve both large and small organizations. To that end, the LCHC Pharmacy designed a Near Miss/Medication Errors form which provided a template for documenting: (1) occurrences and point of discovery; (2) types of near misses/ errors; and (3) prevention strategies. Approved by the Pharmacy Directors Council prior to implementation, the form has been modified over the years to accommodate electronic prescribing and other changes to the health care system.

Prevention as the primary goal

One of the most significant predictors of success with keeping patients safe is the state of an organization’s culture (Smetzer, 2007). For maximum success, the people working in an organization must be open to reporting errors or near misses, view these errors as system failures that can be improved, and feel supported by leadership that welcomes feedback for the purpose of improving patient safety (ISMP, n.d.)

In developing the benchmarking process, Council members took a clear stand that reporting of errors and near misses served the purpose of improving patient safety not only at the institution where the event or near event was detected, but among all pharmacies serving community health center patients in the state.

While each benchmarking partner may collect its overall error rate, evidence showed that comparing error rates among pharmacies proved of little value and therefore did not occur (NCCMERP, 2008). The primary purpose of benchmarking was to learn from each other with a focus on prevention.

Additionally, to ease concerns and further ensure a non-punitive reporting environment, medication errors and near miss data was anonymously faxed by the benchmarking partner pharmacies to the LCHC Pharmacy where a pharmacist collated and analyzed the data for patterns and trends.

At each quarterly Pharmacy Directors Council meeting the aggregate data and analyses were reviewed. Additionally, the group reviewed
reports of other medication errors or near misses from published sources including the Medication Safety Alert and the Ambulatory Care Action Agenda newsletters looking for opportunities to proactively prevent medication mishaps. Another data source was MedWatch, the safety information and adverse event reporting program sponsored by the Federal Drug Administration (FDA).

In reviewing the internal data and external reports, the benchmarking partners collaboratively identified preventative measures for reducing medication errors and near misses in the participating partner pharmacies. Each pharmacy director took these suggestions back to their workplace for implementation.

Examples of success

Examples of success are plentiful. Table 1 highlights a few of the clinical and/or system changes. Importantly, the benefit of benchmarking with a group of partners is that a preventative measure identified at one organization can be quickly adopted by another organization. Otherwise, the issue may not be considered at a pharmacy until a medication error or near miss occurs in its practice site.

Clear win-wins

Initiation of a statewide medication error and near miss benchmarking initiative through the state community health center association has led to numerous benefits.

Staff from across a wide geographic area benefit from forming collaborative relationships with others who face similar pharmacy-related issues. Aggregating data aids in spotting trends faster and leads to quicker implementation of preventative measures. The process also is a vital part of quality improvement efforts mandatory for accreditations from outside organizations.

Table 1: Examples of Interventions Identified using the Medication Error / Near Miss Benchmarking Process

<table>
<thead>
<tr>
<th>Potential Error</th>
<th>Solution</th>
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<tbody>
<tr>
<td>Early in benchmarking process, noticed a larger number of order entry errors</td>
<td>Checklist: Created an order entry checklist to make sure all required data elements were entered</td>
</tr>
<tr>
<td>Patients prescribed combination product opioids were at risk for exceeding recommended daily dose of acetaminophen</td>
<td>Formulary change: Changed opioid medication on formulary to product which contains a lower dose of acetaminophen</td>
</tr>
<tr>
<td>Metformin 500mg and Metformin ER 500mg; hydroxyzine and hydralazine</td>
<td>Storage/labeling change: Separation of drugs on shelves; tall man lettering</td>
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<tr>
<td>With electronic prescribing, started receiving a high number of prescriptions sent wrongly to pharmacy</td>
<td>Technology intervention and provider education: IT department implemented a system change which blocked prescriptions from outside the LCHC system from transmitting to LCHC Pharmacy; educated provider on appropriately selected patient Pharmacy of Choice prior to prescribing</td>
</tr>
<tr>
<td>Process change: Staff ask patient to give name and date of birth</td>
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Given the many benefits identified through the collaborative benchmarking initiative, other states with community health center associations may wish to consider implementing a similar initiative. For a high likelihood of success, start small, keep it simple, and most importantly, maintain a non-punitive reporting culture focused on prevention.

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References


