

In-House Specialty Pharmacy at Cancer Center Improves Quality of Care, Reduces Medical Errors

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Expert Perspective:

“A new model for an in-house specialty pharmacy in a cancer center has led to a significant reduction in prescription errors and the time it takes for patients to receive their medications,” said Don S. Dizon, MD, and ASCO expert and chair of the Quality Care Symposium News Planning Team. “The cost savings that resulted from this collaborative, patient-centered approach for oral chemotherapy were then redirected to patient education, monitoring, and assistance.”

ALEXANDRIA, Va. – An influx of new oral cancer drugs provides patients with a more convenient and less invasive way to take medication, but such treatments are often associated with adherence challenges and medical errors. New research shows that the addition of an in-house specialty pharmacy at a cancer center in New Haven, Connecticut, improved overall quality of care for patients, reduced the amount of time it took patients to receive their medication, and prevented errors associated with filling, dispensing, and taking oral chemotherapy. Authors will present their findings at the American Society of Clinical Oncology’s (ASCO) upcoming [Quality Care Symposium](#), taking place March 3-4, in Orlando, Florida.

“Prior to our in-house pharmacy, we had no idea what happened after we sent prescriptions to outside specialty pharmacies,” said lead author Kerin Adelson, MD, Assistant Professor of Medicine and Chief Quality Officer for Smilow Cancer Hospital at Yale New Haven. “Did the patient start treatment later than recommended? Did the patient take the right combination and on a consistent basis? These were all questions that affect quality and outcomes that we were not able to answer before. Now we can.”

Following the creation of a specialty, in-house pharmacy at the Smilow Cancer Hospital in the Yale

New Haven Health System, along with treatment protocols for every oral chemotherapy drug, researchers saw dramatic improvements in patient care quality. Patients received medication faster—80% of patients received oral treatments within 72 hours of prescribing. Prior to launching a specialty pharmacy, patients often reported anecdotally that they would wait two to three weeks to receive medications. In addition, since the launch of the program, pharmacists prevented more than 400 prescription errors.

The authors convened a multidisciplinary task force comprised of physicians, nurses, pharmacists, and patients with the goal of expediting drug access and improving adherence and toxicity monitoring. The team created treatment protocols for every oral oncology drug and embedded them into the medical center's electronic health record system. All oral oncologic prescriptions were routed to a clinical oncology pharmacist and the specialty pharmacy, where an oncology nurse and pharmacist verified all orders. Pharmacists then placed calls to patients one, five, and 21 days after filling an oral prescription to evaluate for toxicity. All processes related to oral chemotherapy were documented on a multidisciplinary flow sheet in the electronic health record that could be accessed by the entire clinical team.

“Patients prescribed oral chemotherapy and other cancer treatments should be supported and monitored with the same vigilance as those patients who receive chemotherapy intravenously in our clinics or in our hospital,” said Howard Cohen BSP Pharm, MS, FASHP, co-author and Associate Director of Oncology Pharmacy Services at Yale New Haven Hospital. “With our protocol, we are able to better address medication adherence and side effects—all of which translates to a higher quality of care for our patients.”

Researchers were prompted to explore the implementation of a specialty pharmacy after Quality Oncology Practice Initiative (QOPI®) data showed gaps in care quality for oral treatments. QOPI® is an oncologist-led, practice-based quality assessment program designed to promote excellence in cancer care by helping practices create a culture of self-examination and improvement.

Along with a delay in access to medication, researchers found more errors when patients filled their prescriptions elsewhere. Some patients were not taking the right doses or were continuing to receive refills even after their regimen had ended.

The addition of a specialty pharmacy also yielded additional revenue, allowing the not-for-profit cancer center to provide additional services to patients, including the expansion of its medication assistance program. In 2016, an average of 140 patients per month received medication assistance in the form of drug replacement and co-pay support, generally totaling more than \$1.5 million per month.

Researchers hope that that their process will serve as a model to other medical institutions seeking to improve quality of care and timely patient access to medication.

2017 Quality Care Symposium News Planning Team

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[View the disclosures](#) for the News Planning Team.

ATTRIBUTION TO THE 2017 QUALITY CARE SYMPOSIUM IS REQUESTED IN ALL NEWS COVERAGE.

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2017 Quality Care Symposium: Presentation Information

Poster Session A: Cost, Value, and Policy in Quality; Practice of Quality Friday, Mar. 3, 2017: 11:30 AM – 1:00 PM EST Friday, Mar. 3, 2017: 4:15 PM – 5:15 PM EST Hyatt Regency Grand Cypress, Regency Hall, Ground Level	Kerin B. Adelson, MD and Howard Cohen, BSP Pharm, MS, FASHP Yale School of Medicine Yale University New Haven, CT
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Abstract 108: Should Cancer Centers start their own specialty pharmacy? Quality and economic data from the oral chemotherapy program at Smilow Cancer Hospital and Yale New Haven Health System

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Background: Recent focus has shown that oral chemotherapy is high risk for medical error. Our QOPI certification process identified that oral oncologic processes were marked by: lack of documentation in the EMR, patients receiving refills from third party pharmacies after prescription discontinuation, incorrect self-administration of medications due to lack of education, delivery delays, high copays, and underuse of available patient assistance programs. **Methods:** A multidisciplinary task force developed a program to expedite drug access, standardize consent, and ensure clinical support including education, adherence and toxicity monitoring. We expanded an existing health-system pharmacy to provide specialty services. Treatment protocols were

created for every oral oncologic drug, which are routed to a clinical oncology pharmacist and the specialty pharmacy. Nursing and pharmacist verify all orders. Medication Assistance Program for copay support. Day 1, 5 and 21 pharmacist to patient calls. Multidisciplinary flow sheet documentation. **Results:** Today, 80% of our patients receive medication within 72 hours. Specialty pharmacists monitor toxicity even for patients whose prescriptions are filled by other pharmacies. Pharmacists have prevented more than 400 prescription errors. Today, monthly revenue before cost for the oral chemotherapy program is nearly than \$4 million. The total revenue since initiation in February 2015 is over \$44 million, yielding an approximately \$9 million margin after costs. Funding through the medication assistance program exceeded \$1 million thus far in 2016, with an average of 140 patients receiving assistance each month. **Conclusions:** A patient-centered multidisciplinary model integrating clinical, operational, financial, and IT resources optimized care for patients receiving oral oncologic therapy. This project transferred revenue from for-profit third party pharmacies to our non-profit health system, and revenue is used to provide enhanced education, monitoring, and patient assistance. Our collaborative improvement model can be adapted to many practice settings.

Disclosures: Kerin B. Adelson, MD: immediate family member is employed with Lyra Health; Consulting or Advisory Role with Wellpoint; Travel, Accommodations, Expenses from Genentech; Honoraria from Genentech; Anne C. Chiang, MD, PhD: Consulting or Advisory Role with Genentech/Roche and Genentech; Research Funding from OncoMed, Millennium, Onyx, Boehringer Ingelheim, and Lilly.

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