Improving Organizational Sustainability of an Urban Indian Health Clinic With an Innovative Pharmacy Model

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Abstract

Introduction: To increase access to care for the urban American Indian population, a collaboration was developed between an Urban Indian Health Clinic (UIHC) and Federally Qualified Healthcare Center (FQHC) to reduce financial barriers, increase patient access to affordable medications, and augment the integrated model of care. Objective: To describe the design and implementation of an innovative pharmacy model through a partnership between an UIHC and a FQHC. Methods: A collaborative partnership between an UIHC and a FQHC was developed to spread scarce 340B federal resources as a method to enhance patient care. The innovative practice model included the development of processes to (1) increase medication access to all patients by providing access to affordable medications at clinic and the provision of mail order services, (2) minimize program expenses through cost-sharing of a pharmacist salary, (3) expand clinical pharmacy programs (collaborative drug therapy management) to augment integrated patient care, and (4) optimize 340B cost savings for the clinic by establishing contracts and implementing adjudication software to obtain medication reimbursement from Medicaid and other third party insurances. Results: Through the cost-sharing of a pharmacist salary and use of remote verification, the majority of prescription medications were available to patients at the UIHC through implementation and expansion of an other outlet. Collaborative drug therapy management (CDTM) protocols were successfully implemented which allowed clinical pharmacy services to collaboratively manage chronic conditions. All adult primary care providers adopted the integrated patient care model. Third-party pharmacy insurance contracts were obtained and computer software was installed to allow for the adjudication of pharmacy claims, resulting in cost savings from medication reimbursement. Conclusion: The innovative collaborative partnership between an UIHC and an FQHC demonstrated how scarce federal resources can be leveraged using the 340B program to increase patient access to affordable medications. This innovative model reduced financial barriers to the clinic, and allowed for expansion of pharmacist led CDTM programs and augmentation of integrated clinical services. The cost savings observed from this novel program additionally fueled programmatic sustainability through reinvestment into the pharmacy program and is expected to continue to fund the program in the future.

Keywords
340B, clinical pharmacy, community health, health disparities, interprofessional collaboration, Native American/American Indian

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Background

Compared to other American ethnic and cultural groups, Native Americans have lower health status and higher disease burden.¹ The U.S. Department of Health and Human Services has identified that Native Americans are 60% more likely to have asthma, 2.4 times more likely to have diabetes, and 30% more likely to have high blood pressure compared

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to white Americans.2-4 This disproportionate disease burden and accompanying lower life expectancy is partially the result of healthcare disparities and cultural differences, and is amplified by poor medication adherence. Approximately 33% of medication-related hospitalizations in the general population are a result of inappropriate medication use and 50% of medications for chronic diseases are not taken as prescribed.5 Previous work has shown pharmacist-led initiatives can improve medication safety, adherence, and patient outcomes for chronic disease states through identification and resolution of medication related problems (MRPs), thus reducing health disparities and hospitalizations.6,7

According to Indian Health Service (IHS), a majority of American Indian/Alaska Native (AI/AN) individuals live mainly on, or near reservations, and in rural communities.1 An Urban Indian Health Clinic (UIHC) was established in Colorado to address the healthcare needs of the AI population in Colorado and surrounding states who cannot access services administered by IHS and tribal health programs. This clinic utilizes clinical pharmacists as an integral part of the healthcare team across multiple service lines, including primary care, dental, behavioral health, nutrition, and physical fitness.

Urban Indian Health Clinics are covered entities under the 340B federal statute. Under Section 340B of the Public Health Service Act, pharmaceutical manufacturers are required to enter into a pharmaceutical pricing agreement with the Department of Health and Human Services in exchange for having medications covered by Medicaid and Medicare. The manufacturers agree to provide front-end discounts on outpatient drugs purchased by covered entities that serve the nation’s most vulnerable patient populations. The purpose of the program is to stretch federal resources as far as possible, in order to reach more eligible patients.1 Specifically, the design allows healthcare organizations who serve a high percentage of vulnerable patients to expand healthcare services in a way otherwise unattainable without 340B.8

As a covered entity under 340B, the Colorado-based UIHC evaluated if cost benefits from 340B would increase patient access to affordable medications and establish an attainable healthcare delivery system. The clinic conducted a feasibility study for establishing a fully licensed pharmacy. Due to revenues from the low volume of prescriptions filled compared to operating expenses to include a full-time pharmacist salary, it was determined to be financially prohibitive. Alternatively, it was financially viable to establish an “other outlet.” Under the Colorado State Board of Pharmacy, an entity can become licensed as an “other outlet” which operates similar to a pharmacy, where medications can be dispensed to patients, but does not require a pharmacist to be onsite during all hours of operation. The “other outlet” licensing only requires a pharmacist to verify repackaged prescription medications and to perform monthly audits to ensure compliance with the State Board of Pharmacy “other outlet” protocol. Therefore, medications can be dispensed to patients by clinic staff, providers or pharmacy students without having a pharmacist on the premises.

To increase access to care for the urban AI population, a partnership was developed to share pharmacy staff between the UIHC and a Colorado-based Federally Qualified Healthcare Center (FQHC). The collaboration fostered a novel pharmacy program with shared pharmacy staff to conduct clinical services and remote medication verification. This innovative model aimed to reduce financial barriers, increase patient access to affordable medications, and augment the integrated model of care. To our knowledge, this is the first program described in the literature where a collaborative partnership between community health centers was implemented as a method to achieve these goals.

Objective

To describe the design and implementation of an innovative pharmacy model through a partnership between an UIHC and a FQHC.

Methods

Historic Practice Description

The Colorado-based UIHC provides integrated healthcare for approximately 3500 patients. More than 500 of those patients reside in rural areas or outside the Denver Metro area and travel long distances to receive culturally appropriate care. Services provided include primary care, dental care, behavioral health, family-planning, pediatrics, and wellness programs with personal fitness assessments, tailored fitness, and nutritional plans. With the addition of pharmacy services, patients receive collaborative, comprehensive care as well as access to medications at affordable prices. The clinical pharmacy team provides medication-related consults, collaborative provider-patient visits, assistance with triage, vaccine administration, and patient education.

Clinical pharmacy services at the Colorado-based UIHC were established in 2005 through collaboration with a pharmacy school in Denver. In 2013, the UIHC was licensed as an “other outlet” by the State Board of Pharmacy which allowed dispensing of repackaged prescription medications when a pharmacist was not on site. This license afforded the opportunity to expand the role of pharmacy services and enable patients without insurance to access affordable medications. The arrangement included oversight provided by a pharmacist at 20% effort or 0.20 Full-time Equivalent (FTE), who was a contracted faculty clinical pharmacist from the local school of pharmacy. From a prescription
workflow standpoint, the pharmacist at the UIHC verified repackaged medications once weekly, which was sufficient for the clinic staff to dispense medication as needed throughout the week. Unfortunately, the “other outlet” lacked the infrastructure and capability to bill insurance, thus, revenue was based solely on cash payments from a limited formulary. In addition, the “other outlet” did not have dispensing software nor adequate revenue to support an increase in pharmacist time for additional medication verification. Inventory was also an issue, as the program could not provide immediate access to all medications at a low cost due to the limited clinic formulary. Even when the medications were in stock, they were frequently unavailable for dispensing until the next week following the medication verification process. In 2015, grant funding was obtained which expanded clinical pharmacy services, supporting 2 contract faculty clinical pharmacists from the local pharmacy school at 0.2 FTE each (0.4 FTE total). The expansion in clinical services was constrained by the time needed to provide medication verification, as the 0.4 FTE was contracted to cover both the medication verification activities and clinical services to be performed to achieve grant aims. Taken together, these limitations highlighted the need to look for innovative methods to expand the pharmacy program at the UIHC.

New Practice Description

Reconfiguration of the pharmacy model was required and thus, the 2 faculty clinical pharmacists from a local pharmacy school applied for and received a grant from The Colorado Health Foundation to pilot a collaborative model between the UIHC and a local FQHC. It was determined that expansion and sustainability of the proposed new pharmacy program at the UIHC was possible through collaboration with a local FQHC. The program was developed in 2019, implemented in 2020, and classified as a quality improvement project.

The innovative practice model redesign included the development of processes to (1) increase medication access to all patients (uninsured and insured) by providing same day access to affordable medications at the clinic and the provision of mail order services, (2) minimize program expenses through cost-sharing of a pharmacist salary for remote medication verification, (3) expand clinical pharmacy programs to include Collaborative Drug Therapy Management (CDTM) protocols to augment integrated patient care, and (4) optimize 340B cost savings for the clinic by establishing contracts with pharmacy benefit managers and implementing adjudication software to obtain medication reimbursement from Medicaid and other third-party insurances.

The process for developing the remote verification model included the following:

1. Sharing the cost of a pharmacist in order to implement a remote verification process.

With the “other outlet” license, the Colorado-based UIHC increased access to medications by partnering with a local FQHC, where the cost of a pharmacist could be shared to support remote verification of repackaged medications. With this innovative partnership, a 1.0 FTE pharmacist was located at the FQHC and utilized digital camera technology to provide verification of medications at the UIHC remotely. This allowed the UIHC to operate in accordance with the Colorado State Board of Pharmacy Rules and Regulations, where repackaged medications could be verified and documented remotely and then dispensed immediately by a pharmacy intern or medical assistant at the UIHC without a pharmacist on-site. The pharmacist salary and benefits were shared between the 2 organizations, with 0.25 FTE supported by the UIHC, allowing for the FQHC to have a full-time pharmacist on site to manage the clinic pharmacy (Monday through Friday, 8:30-5:30), but only requiring funding of a 0.75 FTE. The FQHC pharmacy and the UIHC “other outlet” remained separately licensed entities, but the cost of the pharmacist was shared between the 2 organizations. This allowed both entities to benefit from shared savings and program income generated from medication reimbursements at their respective sites.

This innovative model allowed for an expanded medication formulary and access to affordable medications for all patients. A focus on improved medication adherence was made possible by the ability to dispense medications and provide targeted patient education in tandem with appointments. Furthermore, augmentation of patient outcomes was possible as the 0.4 FTE faculty clinical pharmacists at the UIHC were able to focus attention on clinical practice rather than medication verification.

2. Establishing a workflow (see Supplemental Appendix).

Ordering and repackaging of medications are essential in the process of prescription workflow at the “other outlet.” The UIHC had a formulary based on specific quantities and package sizes available in the “other outlet.” Non-formulary medications were ordered from the wholesaler as often as necessary. QR codes were printed on each prescription and each medication label as a unique identifier containing the information required for labeling and dispensing. The QR code allows for quick generation of prescription labels in accordance with the State Board of Pharmacy Rules and Regulations. After every medication is labeled, submitted for verification, and added to the pharmacy software, they are kept separate until approved by a pharmacist for dispensing. After pharmacist approval, the medications are shelved for dispensing.
needs prompt dispensing of a medication that is not repackaged or not of the appropriate quantity, the authorized personnel at the UIHC can follow the repackaging process and reach out to the pharmacist at the FQHC for immediate remote verification (see Figure 1).

3. Dispensing medications in clinic.

Providers were informed of the current formulary and quantities to streamline the dispensing process. The QR code from the prescription is scanned and 2 labels printed containing required information. The printed label from the prescription is confirmed that it matches the previously verified label on the medication bottle. Once verified, 1 prescription label is placed on the medication bottle, and the other is placed on the back of the hard copy for documentation purposes. The label and medication are then double checked by an authorized individual, who does not necessarily have to be a pharmacist, before medication is dispensed. The purpose of the double check is to ensure accuracy and is not required by the State Board of Pharmacy. After the double check, the medication is then ready to be dispensed to the patient and sent to the front desk for payment.
4. Establishing mail order services.

There are many patients who have transportation barriers or travel long distances to receive care at the UIHC. Many of these patients are unable to purchase medications at their local pharmacy, so access to affordable medications through the UIHC is essential. For these patients, the addition of mail order services was important as it removed additional healthcare barriers. The “other outlet” uses a web-based, third-party vendor to facilitate mail order upon request from the patient. The prescriptions are filled as outlined above and payment is taken over the phone, if necessary. In the future, payment will be facilitated through the online portal within the electronic health record (EHR). The patient name and shipping information are entered into the software, the medication package is weighed on a scale, and the preferred shipping method is selected. The shipping label is printed and is applied to the package which is then ready for US postal service pickup. Shipping costs are prepaid by the clinic through the company that provides the software and hardware needed. Depending on the distance the package is traveling, the patient typically receives medications in 3 days. However, since medications such as insulin and injectable GLP-1 agonists, which formulary medications, require refrigeration and special handling, these products are excluded from mail order at this time.

5. Expanding clinical pharmacy programs to augment integrated patient care.

CDTM protocols were developed by the school of pharmacy faculty who were contracted clinical pharmacists for the UIHC. Under the CDTM protocols, the Colorado State Board of Pharmacy authorizes pharmacists to independently manage certain aspects of patient care when referred by providers. The protocols include a systematic process of working with patients to assess medication therapies (allowing the pharmacy team member to initiate, discontinue and/or modify medications), identify/resolve MRPs (including placing orders for laboratory monitoring, referrals to dental, ophthalmology, and podiatry specialists), providing patient education and promoting positive lifestyle changes. Collaborative patient visits were another method of utilizing integrated pharmacy services to enhance patient satisfaction and improve patient outcomes. Clinical pharmacists (or students under the supervision of a clinical pharmacist) obtain and document the patient’s chief complaint, medical history, assess medication adherence, and determine need for laboratory monitoring prior to the provider visit. The pharmacy/provider team collaboratively develops an evidence-based assessment and individualized treatment plan. Same day prescriptions are filled and education is provided by a pharmacist or student pharmacist before the patient leaves the clinic. This approach was designed to enhance patient centered care, convenience, and satisfaction.

Collaborative patient visits focus on optimizing management of chronic diseases, such as diabetes, hypertension, asthma, and chronic obstructive pulmonary disease, while enhancing provider efficiency and satisfaction. The model was designed to increase the number of patient encounters without significantly increasing provider workload within the context of more comprehensive, integrated care, with a goal of ultimately improving health outcomes.

6. Implementing pharmacy software for increased cost savings.

In order to optimize 340B savings, the UIHC implemented a cost-effective and easy-to-use software to adjudicate pharmacy claims to Medicaid and other third-party insurance plans. The program chosen allowed the “other outlet” to adjudicate insurance claims and maintain inventory without additional hardware. The program allowed for continuation of established workflows for ordering, repackaging, and labeling. Adoption and implementation of the web-based physician dispensing application minimized expenses since it was selected because it did not require the purchase of prepackaged medications from a specific vendor. The software vendor offered pharmacy services administrative organization (PSAO) services to set up contracts with some insurance companies. However, Colorado Medicaid contracts and several other third-party insurers were established individually.

Evaluation Method

To describe the operational outcomes associated with this program, the following metrics are provided:

1. Medication access to all patients (uninsured and insured)—using the number of prescriptions filled and dispensed through the “other outlet” and the number of mail order prescriptions distributed to patients.

2. Expansion of clinical pharmacy programs provided to patients—using the number of CDTM protocols developed and implemented, the number of clinic providers who referred patients to pharmacy, and the number of patients referred to pharmacy for CDTM.

3. 340B cost savings and pharmacy program expense offset by accepting Medicaid and other third-party insurance were calculated after initiation of new pharmacy model.

Results

1. Increase medication access for all patients (uninsured and insured) through cost-sharing to establish a remote verification process and mail order services:
The medication formulary and inventory were expanded in order to dispense the majority of medications prescribed to patients at clinic for a low cost, where most medications were available for $4 or $8 for a month supply. A total of 6632 medications were prescribed by clinic providers in the first year of implementing the innovative pharmacy model. Of the 6632 prescriptions, 39.2% of these medications were dispensed at clinic. The percentage of medications filled at clinic continued to increase during years 2 and 3, despite clinic closures due to COVID-19 pandemic in year 3. During the clinic closure period, there was a decrease in number of prescriptions filled, but many of the medications prescribed were shifted from a 30-day supply to a 90-day supply. By the end of year 3, approximately 70% of all medication prescribed were being dispensed in clinic. Although the clinic doors at the UIHC were closed to patients, medication access was not impacted and patients continued to receive affordable medications with minimal interruption. This was possible as the clinic offered the option of curbside pickup and provision of mailing services. A total of 714 medications have been mailed to patients since the implementation of the mailing services in year 2.

2. Expand clinical pharmacy programs to augment integrated patient care.

CDTM protocols were successfully implemented and included the management of hypertension, diabetes (under the general diabetes protocol, rapid insulin titration protocol, and U-500R insulin management protocol), asthma, and chronic obstructive pulmonary disease. All of the adult primary care providers (n = 3) adopted the integrated patient care model and continue to refer patients to pharmacy services to receive collaborative patient management per protocol. On average, 8 patients per month were referred to clinical pharmacy services for CDTM management. Patients are managed by clinical pharmacy services on a routine basis until their chronic disease state is controlled. A total of 41 patients were referred to pharmacy for diabetes management, 26 patients referred for hypertension management and 5 patients referred for asthma and COPD management. Continuous glucose monitors for patients with diabetes and blood pressure monitoring devices for patients with hypertension were supplied to further support clinical pharmacy programming. These devices enabled patients to conveniently monitor trends in blood glucose and blood pressure values at home. The ability to conduct home monitoring and communicate information to providers was essential during the Governor’s “Stay-At-Home” Executive Orders. The data was instrumental for telemedicine visits during the COVID-19 pandemic. Implementation of CDTM and home monitoring prior to the pandemic outbreak was efficacious for assessing health status and adjusting medications as needed.

3. Increase cost savings for the clinic by accepting Medicaid and other third-party insurances.

Third-party billing was established by negotiating Medicaid and other third-party insurance contracts in the spring of 2020. Pharmacy claims are processed through the pharmacy software. Grant funding supported the implementation and cost associated with sustaining the program during years 1 and 2. During year 3, sufficient contracting and reimbursement for medications began to offset program cost. Currently, the innovative pharmacy program is fully self-sustaining without grant funding. The additional cost savings appreciated are reinvested into the pharmacy program for fiscal sustainability.

Practice Implications

Implementation of clinical pharmacy services in the primary care setting is often limited by lack of reimbursement for pharmacist services. This innovative program provided a model for sustainable pharmacy services within community health centers. Patients received increased access to affordable medications by utilization of the 340B program, remote verification, and mail order services. Additionally, providers and patients were provided with expanded clinical pharmacy services, which augmented the integrated model of patient care. Lastly, with continued cost savings generated from the expansion of pharmacy services, the UIHC was able to reinvest in the pharmacy program and the FQHC was able to offset pharmacist salary through the unique collaboration. Overall, this innovation has had a tremendous benefit for all parties involved.

Increased access to medications and supplies for patients had expected and unexpected implications. As expected, a benefit of implementing an option for mailing prescriptions to patients with transportation barriers provided patients access to affordable medications without having to travel a significant distance. Unexpectedly, during the COVID-19 pandemic, patients were able to still receive medications without putting themselves at risk for exposure no matter how far they lived from the UIHC. Additionally, because patients had access to medications and medical supplies, they were able to receive healthcare through telemedicine and had minimal gaps in treatment during a unique time of uncertainty.

The addition of clinical pharmacy CDTM protocols allowed the pharmacy team member to independently manage patients referred to pharmacy. In conjunction to referring patients to pharmacy for CDTM management, primary care providers engaged in collaborative patient visits, where the patient visits were shared between the provider and a clinical pharmacy team member. The collaborative patient visits further expanded integrated patient care services at the UIHC. CDTM and collaborative patient visits focus on
optimizing management of chronic diseases (eg, diabetes, hypertension, asthma, and chronic obstructive pulmonary disease) while enhancing provider efficiency and satisfaction. With the collaborative patient visits, provider efficiency was further enhanced as the pharmacy team-member obtained and documented pertinent patient information needed to make an assessment and plan (patient’s chief complaint, medical history, assessment of medication adherence, need for laboratory monitoring, identification of DRPs) prior to the provider visit. Because this model was designed to increase provider efficiency, it was possible for the providers to see more patients without significantly increasing provider workload. Furthermore, the collaborative patient visits supported comprehensive patient care with the goal of improving health outcomes for the patient. It was felt that expansion of integrated patient care allowed for closer management of chronic disease states, a more wholistic team-based approach to care plans, and served as an avenue for patients to have concerns promptly addressed.

**Challenges**

Minor challenges were faced during project initiation resulting in timeline delays. The physical modification to the clinic took longer than expected due to contract negotiations and installation delays with the shelving company. Without shelving, inventory was unable to be expanded. Additionally, contracting with Medicaid and third-party insurance companies presented as a challenge. Each contract had a different set of requirements for approval and the amount of time required to get the contracts approved and implemented took longer than expected. Another lesson learned was the need for a structured and timely communication process between the “other outlet” and remote consultant pharmacist. During the COVID-19 pandemic, student pharmacists who were on rotation with the faculty clinical pharmacists were not allowed to be at clinic for several months even though the “other outlet” was still open. It was learned that any program should be cautious of having a heavy reliance on student contribution for operations. Although there were challenges, the benefits of implementation far outweighed the challenges experienced.

**Conclusion**

The design and implementation of an innovative pharmacy model through a collaborative partnership between an UIHC and an FQHC demonstrated how scarce federal resources can be leveraged using the 340B program to increase patient access to affordable medications. This innovative model reduced financial barriers to the clinic, and allowed for expansion of pharmacist led CDTM programs and augmentation of integrated clinical services. The cost savings observed from this novel program additionally fueled programmatic sustainability through reinvestment into the pharmacy program and is expected to continue to fund the program in the future.

**Declaration of Conflicting Interests**

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**Supplemental Material**

Supplemental material for this article is available online.

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