Original Work

Pharmacy Efforts to Dismantle Health Disparities

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According to the 2019 National Healthcare Quality and Disparities Report, Blacks, American Indians, Alaska Natives, and Hispanics receive worse care than Whites.[1] This adds to existing evidence that certain racial and ethnic groups have limited access to healthcare. These limitations contribute to health disparities. The Office of Disease Control and Prevention and Health Promotion's Healthy People 2020 initiative defines a health disparity as "a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage. Health disparities adversely affect people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion."[2-4]

Pharmacists play an active role in patient care and are accessible healthcare professionals. "Data shows that patients see their pharmacists 8 times more often than primary care providers, making pharmacists uniquely influential in health care."[5] Pharmacists in the community setting provide a wide range of services (e.g., blood pressure screenings and immunizations) that help ensure patient wellness and adequate disease management. Pharmacists not only offer these services to their patients, but they also serve as a bridge between the patient and the provider. The availability of pharmacists allows for better access to healthcare for those individuals who may not have the opportunity and resources to visit their primary care physician. For instance, "...community pharmacists have a role to play in a collaborative care model as evidence shows pharmacists are capable of screening for depression and referring patients for assessment and appropriate management."[6] Though pharmacists provide a plethora of services to ensure positive health outcomes for their patients, health disparities are still seen in all healthcare settings, including pharmacies.

Health disparities have been an issue for many years. Unfortunately, health disparities exist in most disadvantaged, low-income communities. For example, "in 2017, the rate of hospital admissions for short-term complications of diabetes was three times as high for adults in the lowest income group (101.0 per 100,000 population) compared with adults in the highest income group (32.9 per 100,000 population)."[7] Pharmacies already have many procedures and services in place to help those who may be affected by health disparities. In particular, pharmacists can administer vaccines, counsel patients on medications, provide education about disease management, and help with referrals through outreach programs.[5] What may seem like "small" gestures like these in pharmacies have made a huge impact on those with limited healthcare access, by creating a welcoming environment and showing community members that pharmacists are there to provide accessible patient-centered care.

While much effort has been put into narrowing the care gap, there is still a lot of work to be done. This article offers guidelines for pharmacists to learn about existing health disparities and how they can develop strategies to reduce them. It is important to note that not every program will work in every case, as each community has its own subset of health disparities. Our goal is to examine current practice strategies addressing health disparities in under-resourced communities.

Methods

We identified a pharmacist from three different pharmacies located in underserved communities in Madison, Wisconsin. The pharmacists were asked to share their accounts of health disparities within the patient populations they serve. Pharmacists and their respective pharmacies are referred to as A, B, and C. Pharmacists A, B, and C were selected due to their locations in the city of Madison and the variability among their patient populations and pharmacy services. Pharmacy A operates in conjunction with a community health center located in south/central Madison. The patient population is primarily low-income and non-English speaking. Pharmacy B is a charitable pharmacy located in south Madison, and it was established for provision of medications to individuals who are uninsured. This pharmacy serves patients that are at or below 200% the federal poverty level, and the demographic is ethnically diverse. Pharmacy C is a worker cooperative aimed at promoting better health in the Madison community. The patient demographic has economic variability and includes many students, working class adults, and older adults.

We asked the pharmacists these questions:

1. Can you tell me about the patient demographics seen at your pharmacy?
2. How would you define a health disparity?
3. How were these disparities identified?
4. What services do you currently offer in your pharmacy, and do you have any programs that address specific health disparities?
5. Have you seen any direct benefits of these programs, and what are they?
6. What advice do you have for pharmacies who want to start programs to help individuals facing health disparities?

The interviews were conducted and recorded through Zoom, due to COVID-19 limitations. The authors interviewed the pharmacists and transcribed the conversations. Authors LaMonte, Schier, Carstens, and Hakala authorized Pharmacists A, B, and C to review their

TABLE 1. Services Provided by Pharmacy A, Pharmacy B, and Pharmacy C

Pharmacy A	*Pharmacy B*	*Pharmacy C*
• 340B • Diabetes education • Blood pressure & cholesterol screenings • Interpreter services • Retrospective screening* • Vaccinations	• Clinical Laboratory Improvement Amendments (CLIA) Certificate of Waiver • Diabetes education • Blood pressure & cholesterol screenings • Vaccine clinics • Closely connected to a food pantry • Medication repository**	• Medication repository** • Connection with the Acquired immunodeficiency syndrome (AIDS) Resource Center of WI—Free needle distribution • Vaccinations

*Retrospective Screening (Pharmacist A's definition): "Our retrospective screening is screening patients who were seen in clinic 6 weeks prior and gauging if they need follow up from the pharmacy team. [It] is to ensure that patients aren't falling through the cracks with blood pressure management. The screening process is as follows:

1. Screen patients who were seen in the family medicine clinic 6 weeks prior.
2. Look at patients who have elevated blood pressures and then were either lost to follow up or blood pressures remain uncontrolled. (Specific at-risk populations are prioritized: those of African American descent, diabetes history, past MI, stroke, etc)
3. Schedule patients with an in person visit with the pharmacy team to address medication management, adherence, and lifestyle, and to recheck blood pressure."

**Medication repository definition: A repository is a drug donation program where people can donate unused and unexpired medications for redistribution to uninsured patients who would otherwise be unable to afford the medication.

interview transcripts.

LaMonte, Schier, Carstens, Hakala, and Dr. Eva Vivian summarized the transcribed interviews provided by Pharmacists A, B, and C. Distinctions among demographics, pharmacy services, patient health benefits, and pharmacy resources were prevalent. Pharmacists A, B, and C provided different pharmacy perspectives within a relatively small geographic location. The goal of the interview was to identify current pharmacy efforts toward tackling health disparities.

Results

The pharmacist's responses related to our questions are presented below:

Question 1: Can you tell me about your patient demographics seen at your pharmacy?

Pharmacist A: "The main demographics are those of lower income and the underserved… a certain income requirement. A lot of them are low health literacy, low income, and a lot of them are... non-English speaking patients."

Pharmacist B: "The patients that we take care of are at or below 200% of the federal poverty level; so that means for a household of one person, they are making about $2,000 a month, or $24,000 a year on an annual basis. And you can figure about $600 extra per additional family member. So a lot of our patients are working poor. They may have a part time job or maybe a couple of part time jobs that don't provide benefits. A third of our patients are [native Spanish speakers] and in terms of ethnic distribution, we have Black, White, Korean, Tibetan, and Filipino patients."

Pharmacist C: "We have quite the variety… We have students, we have people that work downtown, we have transgender patients—not so much families with children... There are elderly, and there are people that live downtown."

Question 2: How would you define a health disparity?

Pharmacist A: "To me, a healthcare disparity is when there is something wrong with the system and as a result there are certain people or individuals who have lack of access to care, either due to their income, their background, or their race. Unfortunately, these factors can predispose individuals to higher risk of certain diseases such as hypertension, heart failure, and stroke.

"I see populations who are non-White, LatinX, African American, Hmong—those are the people who usually don't have access to care, regardless of income levels or where they grew up. Having a lower income, or not being born in this country predisposes people to not being healthcare literate, as well as not having access to care."

Pharmacist B: "I really liked the CDC definition of health disparity. The CDC defines health disparities as 'preventable differences in the burden of disease, injury, violence or opportunities to achieve optimal health, that are experienced by socially disadvantaged populations.' So, because of the environments that folks are living in, their life expectancy and their health outcomes can vary greatly."

Pharmacist C: Pharmacist C did not provide a clear definition of what a health disparity was.

Question 3: How were these disparities identified?

Pharmacist A: "There are two ways that we receive patients on our panel. One way is that the pharmacist retrospectively screens them. We look back at the clinic's patient panel over maybe six to eight weeks and see where there are gaps in care, specifically looking at blood pressure or cholesterol medicine use. The other way is that the provider refers a patient to us."

Pharmacist B: "We actually did a needs assessment survey every year where we see around 1000 families a month. They were all surveyed to...help identify things they were struggling with and what things they need help with.

"We have a diabetes wellness program that is in conjunction with the food pantry, where we actually have identified folks that have diabetes"

Pharmacist C: "On a daily basis we have conversations with our patients, and I can tell how thankful they are... for example the transgender community. They feel safe coming here and know that we're here to take care of them and not judge them for

what they're picking up at the pharmacy."

Question 4: What services do you currently offer in your pharmacy, and do you have any programs that address specific health disparities?

Please see Table 1 for a cumulative list of pharmacy services offered at Pharmacy A, B, and C.

Pharmacist A: "What's really convenient with our clinic is that we're currently funded and have a 340B account. So we're allowed to purchase medicines that are usually really high costs to the patient and pharmacies at a lower cost. In doing so, we're able to provide medications at a really discounted rate. We also offer free diabetes education and teaching… We are able to set up consultations, to go through diabetes testing, how to administer insulin and discuss other related care. In our pharmacy, another way we address healthcare disparities is by doing retrospective screening, targeting those patients who are at highest risk for hypertension, hyperlipidemia and stroke."

Pharmacist B: "We do actually have a CLIA Certificate. So we are able to do point of care testing...that's one of the areas we want to move into to help provide quantitative measures to help folks assess where they are with their health.

"We do immunize patients… and we offer the flu vaccine to the clients from the food pantry as well as our own pharmacy patients.

"In addition to that, we have a diabetes wellness program that is in conjunction with the food pantry, where we actually have identified folks that have diabetes.... And we had hoped to pair that with some education or training."

Pharmacist C: "We have a repository; people can donate their unused, unexpired medications. Not pills, usually, unless it's in their stock bottle sealed. So it's usually inhalers, eyedrops, things like that. They can donate them and then we can give them out to our customers who can't afford medications or who don't have insurance, for free.

"We provide needles to help prevent the spread of disease. We used to be paired with the AIDS Resource Center of Wisconsin, and they provided us with those needles, at no charge to dispense to people."

TABLE 2. Resources/Recommendations to Aid in Service Implementation

Financial Resources	• **Apply for grants.** Though grants are often limited in number, it is worthwhile to apply to any grants a service/pharmacy is eligible for. Below are a few grants for which community pharmacies can apply based on certain eligibility requirements: » American Pharmacists Association (APhA) Foundation Incentive Grants » Community Pharmacy Foundation • **Reimbursement:** Find additional ways to get reimbursement. For example, medication therapy management (MTM) and comprehensive medication reviews (CMR) are great ways to increase a pharmacy's revenue. If workflow allows, implementing additional patient-centered services that insurance companies reimburse can add to a pharmacy's fund. • **Apply for 340B.** Applying for 340B should be considered if permitted by the pharmacy/institution. 340B allows pharmacies/institutions to buy medication(s) at a lower cost and to sell their medication(s) to their patients at an affordable price. • **Apply for a CLIA Certificate of Waiver.** This certification allows pharmacies to have point-of-care testing, under the regulations of the CLIA Certificate of Waiver, accessible to patients.
Additional Resources	• **Pharmacy students.** Students are a valuable resource as they are motivated to advance the pharmacy profession. Students are always looking for new ways to get involved. Utilizing students to help with the start or expansion of a service/project may be beneficial. • **Volunteers, community members, and/or community organizations.** Volunteers can help with simple tasks in the pharmacy to reduce the workload. Community organizations can advertise pharmacy events/services such as promoting vaccine clinics. • **Technicians.** Technicians are significant assets to a pharmacy team. Technicians are a great resource to utilize when looking into new opportunities for a pharmacy.
Recommendations	• **Pharmacy partners:** Find other pharmacies to partner with to expand access to healthcare or establish new services. Making connections with other pharmacies, or strengthening that connection, can be a start to lessening health disparities. If pharmacies within a community work together and are knowledgeable about what each other offers, pharmacists, technicians, and other staff members will be adequately informed on which pharmacy to refer their patients when in need of a specific service or medication. • **Volunteers:** When utilizing volunteers, the longevity of volunteers is important. Try implementing a volunteer program that has specific requirements, such as requiring a certain number of volunteer hours per week. A volunteer program may be necessary to ensure volunteers are there regularly to avoid pharmacy staff being unproductive by constantly training new volunteers. Also, a volunteer program will help to set volunteer standards and expectations. • **Pharmacy staff buy-in.** It is critical that the pharmacy staff understands the importance of implementing a new service. Listening to feedback from team members and having ways to decrease staff resistance to the new or changed service should be considered. • **Advertising.** A new service needs to be advertised to patients and the community. If patients don't know about the service, they can't utilize it. It is important that all members of the pharmacy staff understand the goal of the service to ensure they can describe the importance and the goal of the service to patients.

Question 5: Have you seen any direct benefits of these programs, and what are they?

Pharmacist A: "Yes. I think that one of the most wonderful things working in [my pharmacy] is seeing patients who weren't able to afford their medications...finally seeing their A1C or diabetes blood sugar levels improve just because they have access to medications.

"Witnessing patients' increased comfort levels in our clinic is important as well. A lot of our patients are Spanish-speaking...a lot of our providers are Spanish-speaking doctors, and we have interpreters on site. That also helps bridge the gap of care."

Pharmacist B: "We had one patient who was motivated and came to us with an elevated blood pressure...we worked with him and the doctors and got him on a regimen and now his blood pressure is perfect. And there are times where he would come in just to get his blood pressure taken, because he saw the results, and he was motivated to keep them that way. So, it was truly a partnership."

Pharmacist C: "As far as the repository, I have definitely seen people be very thankful for us providing these medications. A lot of these medications are very expensive, such as inhalers or eyedrops. I've seen the benefit of...people's reactions to what we can do for them."

Question 6: What advice do you have for pharmacies who want to start programs to help individuals facing health disparities?

Pharmacist A: "[Find] government programs to fund you because the biggest barrier to trying to provide the access that we have is funding. So I would probably start by seeing how you can receive grants, how to become an access point, and how to have that 340B. We're trying our best to eliminate costs for patients…

"Our clinic wouldn't be possible without all the health care providers that are involved. From pharmacists to social workers to doctors to [medical assistants] to [physician assistants], so I would say having a good interprofessional team, who have the same overarching goal of providing access to care to those unable to afford it."

Pharmacist B: "I would say that as community pharmacists we're the most accessible health care team member… Oftentimes, and traditionally, this has been the case that the community pharmacist has really been kind of the pillar of information and [a] trusted resource in the community.

"You don't have to have all the answers but just really being able to refer [patients]... is really a good thing to be aware of and know."

Pharmacist C: "Never give up, because it can become overwhelming and frustrating sometimes to start something up and to continue with it, especially if you don't know the results or the benefits necessarily, but we're helping the community and our patients, and I think not giving up on something like that is the key."

Discussion

Spectrum of Health Disparity Knowledge

In order to address health disparities in their communities, pharmacists must first recognize that those disparities exist. This involves knowing what a health disparity is and having the ability to recognize what disparities are present in the communities they serve. Among the pharmacists we interviewed, we found that there is a spectrum of health disparity knowledge. One pharmacist was unable to provide a clear definition of health disparities, but all three were able to identify needs within their community. In one study of New Zealand pharmacists, Aspden and colleagues found that anywhere from 24% to 67% of pharmacists had knowledge regarding specific health disparities.[8]

Various opportunities exist for pharmacists wanting to learn more about health disparities. Aspden et al found that 80% of pharmacists surveyed wanted to learn more about health disparities.[8] Those with limited knowledge may want to start with basic research on what health disparities are and ways to identify those disparities within their communities. It is also important to acknowledge the social and economic determinants of health that predispose patients to health disparities. In some communities, public records can describe the disparities present. However, pharmacists may need to develop formal surveys for patients, such as the annual needs assessment performed by Pharmacy B. Community needs and demographics can be collected and assessed through conversations and relationships with patients—this approach is utilized by Pharmacy C. Understanding the patient population and health disparities that exist within a community is an important step before implementing change into practice. Even with increased knowledge of health disparities and self-awareness of biases, pharmacists' comfort in cross-cultural encounters is not necessarily increased.[9] Pharmacists must be comfortable in these encounters in order to best serve their patients.

Pharmacy Structures and Origin

Each pharmacy in our study had a different structure that influenced its impact on health disparities. Pharmacy A utilizes the government 340B program to reduce prescription costs. Additionally, the pharmacist could consult each patient up to an hour to assess understanding and overall well-being of the patient. Pharmacy B is a charitable pharmacy where government aid, donations, and volunteers make it possible to provide patients with little- to no-cost prescriptions and counseling. Pharmacy C is a retail community practice that does not have a specific focus on providing care to low-income patients.

The structures of these pharmacies can create limitations in implementing strategies to address health disparities. For example, not all pharmacies fit the criteria to apply for a 340B program. Additionally, it can be difficult to allot enough time for consultation for adequate information collection. It can be challenging for pharmacies that do not have these attributes or resources to attend to the needs of the community. However, these limitations should not be an excuse to eliminate opportunities to offer helpful services. The nature of the pharmacist is to provide patient-centered care, which includes patients who have difficulty accessing or acquiring the medications they need.

TABLE 3. Educational Resources for Pharmacists and Pharmacies Regarding Health Disparities

- The American College of Surgeons Committee on Health Care Disparities—Health Care Disparities Resources
- Centers for Disease Control and Prevention—Racial and Ethnic Approaches to Community Health
- Healthy People 2020—Disparities
- U.S. Department of Health and Human Services—Health Disparities Resources

Services

Community pharmacists are in an ideal position to address health disparities. Pharmacy services can target specific health disparities or provide general support. Pharmacies A, B, and C have a combination of services that provide specific and general assistance to their patient populations.

Pharmacy A believes medical interpreters are a valuable resource for both patients and healthcare professionals. Low health literacy disproportionately affects those who speak English as a second language.[10] Patients possessing reduced health literacy perceive poorer communication

with their pharmacists.[11] Furthermore, there is an increased risk of improper use and consumption of medications by patients with limited health literacy.[12] Medical interpreters can help close the communication gap between pharmacists and patients with different primary languages. At Pharmacy A, the interpreter service has helped bridge the gap of care and increased comfort levels for Spanish-speaking patients. If a pharmacy is unable to provide an interpreter service, multilingual education materials can provide a supplemental source of information. Pharmacists should be aware of the primary languages within the pharmacy's patient population to implement this service or similar services appropriately.

Pharmacy C services a needle exchange program, which directly benefits the population of people who use injectable drugs through the provision of harm reduction. This program decreases transmission rates for diseases like human immunodeficiency virus (HIV) and hepatitis C.[13] Harm reduction services support health equity and address disparities by serving vulnerable populations like injection drug users.[14]

Many pharmacy services can still have a significant impact on health disparities in their community without specifically targeting a single patient population. The goal of these services is to increase general medication and service access. For example, Pharmacy B and C both offer a repository service. Pharmacist C hopes awareness of repository programs expands and partnership between pharmacies improves to allow for easier referral of patients, which will increase medication access. Other programs, like the 340B program and the CLIA Certificate of Waiver provide low-income and uninsured patients with medications and pharmacy services at a discounted cost. Pharmacy A is enrolled in the 340B program, which uses limited federal resources to reduce the price of outpatient medications. Furthermore, Pharmacy B has a CLIA Certificate of Waiver, which allows for the pharmacy to provide immunizations and on-site point of care testing. These programs put the pharmacies in a favorable position to provide care for low-income populations.

Pharmacy immunization services support preventative care and are often cost-effective.[15] Increased vaccine access and equitable administration mitigates disproportionate negative health impacts and reduces the risk of disease. Pharmacy students have been used as a resource in vaccination efforts throughout the COVID-19 pandemic. Students have been helpful in administering vaccines, organizing clinics, and registering vaccinations. Having additional immunizers, like pharmacy students, increases vaccine access within a pharmacy without significantly impacting pharmacist workflow.

Educational programs on various disease states that are prevalent within a certain ethnic/racial group in the community and partnerships with local food pantries are additional services that pharmacies can offer to benefit patients burdened by health disparities. Pharmacies A and B offer diabetes wellness and education programs. Diabetes education programs have been shown to increase knowledge about the disease state and improve self-care behaviors and self-efficacy for patients with adequate and inadequate levels of health literacy.[10]

Pharmacy B is directly partnered with a local food pantry. The partnership has increased medication and food access for all its patients. Adults and children who are food insecure are at a greater risk for negative health outcomes.[16] Diabetes and cardiovascular programs in conjunction with a food pantry can help patients obtain healthy food options. The ability to refer patients to local food pantries can be easily emulated by all pharmacies. Pharmacies can also provide patients with an affordable "healthy grocery list" or healthy recipes to support higher quality diets for low-income individuals.[17]

Pharmacy B provides a needs assessment survey annually, and Pharmacy A has retrospective screening of patients. The needs assessment survey provides the pharmacy with a better understanding of the different adversities being faced within the community. Pharmacy A, B, and C use consultation and the patient-pharmacist relationship to stay up-to-date with current patient needs. Pharmacist B regarded a pharmacist-patient relationship as a "partnership," which increased patient adherence and motivation. Statements from Pharmacist A, B, and C suggest that communication with patients is at the center of providing excellent patient care.

Limitations

The pharmacists and pharmacies examined for this article were restricted to Madison, Wisconsin. As the patient population changes, so does the burden of health disparities. Rural communities and more urban areas would provide additional insight to the interpretation of health disparities and pharmacy services within Wisconsin. This paper only references three pharmacists from three different pharmacies. Examining different pharmacists' understanding of health disparities within the same pharmacy setting may provide greater information about the spectrum of knowledge. This paper would benefit from interviewing more pharmacists from different areas in Wisconsin to better understand variability of health disparities and services available within Wisconsin. Information from a greater sample size would allow for more accurate interpretation of pharmacy action toward addressing health disparities

Resources and Recommendations for Pharmacy Services

Finding ways to implement and adapt new and existing services can be challenging with limited resources. Table 2 provides a non-exhaustive list of resources for expanding monetary assets and additional proposals to establish services within a pharmacy or institution. These resources and recommendations can help to reduce costs, increase workflow efficiency, provide better access to patients, promote pharmacy services, and help to relieve pharmacists' stress from being overworked.

What you can do right now

There are many propositions for lessening health disparities in our communities and making healthcare more accessible for patients, but the process needs to be taken in an incremental fashion. Instead of trying to carry out new ideas right away, it is crucial to self-educate to ensure the implementation of the most supportive services. Reading this article was a great way to learn more about health disparities, but that is just the start. It is recommended to read additional articles, watch videos/documentaries, or learn from patients' stories to continuously stay up to date on the topic of health disparities. Table

3 provides additional educational resources that address the topic of health disparities. Continue to ask: What is a health disparity? Who do health disparities affect? In what ways are health disparities being addressed in different healthcare settings? What can I do to help address and lessen health disparities in my community? Health disparities are not going to be the same in every region, so education on the specific patient population being served is key. Once comfortable with the patient population and health disparities that exist in a specific location, it becomes easier to implement pharmacy services that target the prevalent inequities. Look into different resources and ask for help when needed. Pharmacists have a responsibility to train, educate, and ensure equitable patient care.

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