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A New Consultation Service for Community Pharmacies? An Investigation of Pharmacists' Perspective on Implementing a Weight Management Program

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A NEW CONSULTATION SERVICE FOR COMMUNITY PHARMACIES?
AN INVESTIGATION OF PHARMACISTS' PERSPECTIVE ON IMPLEMENTING
A WEIGHT MANAGEMENT PROGRAM

by
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A thesis submitted to the faculty of The University of Mississippi in partial
fulfillment of the requirements of the Sally McDonnell Barksdale Honors College.

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Approved by

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ABSTRACT

**A New Consultation Service for Community Pharmacies?
An Investigation of Pharmacists' Perspective on Implementing a Weight
Management Program
(Under the direction of Meagen Rosenthal)**

Pharmacists are capable and interested in providing a targeted weight management intervention addressing the high rates, and associated risk, of obesity. A series of in-depth phone interviews with Mississippi community pharmacists were used to gain their perspective on a systematic approach for delivering a weight and obesity management service to patients. Using qualitative content analysis, three themes were identified and analyzed. These themes included: pharmacist's perceptions of patient's needs, program structural components, and pharmacist's implementational needs. These findings can be used to expand the role of pharmacists, serve as a model for the development of other consultation services, improve health outcomes for patients with obesity, and save the healthcare system money. This investigation of pharmacists' perspectives on the development of a weight management service could be used to design a program to minimize implementation barriers and become sustainable for the long term.

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LIST OF ABBREVIATIONS

BMI	Body-Mass Index
CDC	Centers for Disease Control and Prevention
IRB	Institutional Review Board

BACKGROUND

Obesity* should be considered and treated as a public health crisis by healthcare professionals across the globe. Obesity is not an exclusive disease. Individuals of every race, gender, age group, state, or nation are affected. Developed countries, like the United States, should be aware of this issue and proactively seeking new ways to intervene. Starting in Mississippi, a state consistently ranking high in obesity rates, pharmacists have the potential to expand their roles to combat this health crisis (1). The impact of offering a weight management consultation service in the pharmacy could be invaluable in efforts to change patients' health and quality of life.

Who Does Obesity Affect?

Obesity is a global issue. Although obesity is a preventable disease, more than 600 million people worldwide have been diagnosed, with that more than doubling since 1980 (2). In the United Kingdom the obesity rates have more than tripled over the last 30 years. Furthermore, it is estimated that the number of individuals diagnosed could possibly equal more than half the population by 2050 (3). In Canada, approximately 20.2% of adults are clinically diagnosed with obesity (4). Since 1975, India and Asia have transitioned from regions with

*It is important to make the distinction at this point between individuals who are overweight and those who have been diagnosed with obesity. Body mass index (BMI) is a number based on the combination of a person's weight and height used to calculate if an individual falls in the category of being overweight or obese. An adult with a BMI between 25 and 29.9 is considered to be overweight, while an someone with a BMI of 30 or higher is diagnosed with obesity (30).

severely underweight populations and marginal number of individuals diagnosed with obesity to among the highest number of obese individuals worldwide (5).

Unfortunately, rates of obesity in the United States are particularly high. In majority of the United States, 25% of the adult population are considered to have obesity (6). Behind West Virginia only, Mississippi is the second leading state in the obesity crisis with 37.3% of the population having obesity (6).

What Does Obesity Lead To?

Individuals who have obesity have a higher risk of health problems in their future, spend more money on doctor's office visits, and take more sick days (7). Overall, individual diagnosed obesity have a poorer quality of life than those of a healthy weight (8). High body-mass index (BMI) has been shown to be a key risk factor for individuals with cardiovascular disease, kidney disease, diabetes, and some cancers. In over a combination of 33 studies with more than 300,000 participants, there was a positive correlation between BMI and cardiovascular disease (9).

While Centers for Disease Control (CDC) has found that the percentage of individuals with most cancers has decreased with medical advancements, cancers associated with overweight and obesity are on the rise, showing a 7% increase (10). Obesity is currently associated with at least 13 different types of cancer, making up 40% of all diagnosed cancer cases (10).

In 2010, almost 1.7 million Mississippi citizens suffered from a disease stemming from obesity (Diabetes: 284,269; Hypertension: 595,822; Heart

Disease: 183,417; Arthritis: 589,477; Obesity-Related Cancer: 46,018) (1). Even more jolting, there is significant evidence presented that links obesity with a general increase in mortality rates (11).

There are steep costs associated with obesity; the United States currently spends between roughly \$147 billion to \$210 billion per year on treating patients who have obesity (7). Employers are spending billions of dollars each year due to employees who have obesity taking more time off work and being less productive while at their job (costing approximately \$4.3 billion annually and with lower productivity while at work, costing employers \$506 per obese worker per year) (7).

Community Pharmacists Involvement Equals a Solution

Community pharmacists are accessible, trusted professionals, and effective communicators. Patients are more likely to visit their pharmacist before going to a doctor's office or clinic. According to research conducted by the Community Care of North Carolina on a population of Medicaid patients, primary care providers interacting with patients on average 3.5 times a year while community pharmacists consult their patients about 35 times per year (12).

Most Americans believe pharmacists to be similar to medical doctors when it comes to honesty and ethics (13). Pharmacists are consistently rated one of the most trusted healthcare providers (14). Community pharmacists are effective communicators when it comes to interacting with the public. A systematic review conducted in 2016 examined the potential areas for pharmacy-

driven intervention and found that weight management services could be a feasible option for pharmacists to implement (15). All of these factors indicate that community pharmacists are capable of fighting the current obesity problem in the United States.

Not only are pharmacists equipped to provide weight management interventions, but previous investigations indicate this is a service that pharmacists want to provide. Major retailers, like Kroger Pharmacy and Walgreens Pharmacy, have conducted investigations on pharmacist-led interventions. While Kroger Pharmacy was interested in offering a weight management service internally to their employees, Walgreens Pharmacy's investigations included a 6-month pharmacist-led intervention with 14 participants (16)(17).

Objective

To interview Mississippi community pharmacists and gain their perspective on a systematic approach to deliver weight and obesity management services to patients.

METHODS

Study Design

This study used in depth interviews to identify community pharmacists' perceptions of the best approach to deliver weight and obesity management services to patients. This investigation received IRB Exempt Approval of 18x-234. An in depth interview can be used as a stand-alone research method to capture people's thoughts, perceptions and attitudes through guided questioning, while still allowing freedom for respondent to express ideas and thoughts that could not be anticipated by the researcher (18). Overall, in-depth interviews are the most effective way to discover the solution to the question posed because it allows the interviewees to express the way they feel, explain their prior knowledge, and provide data that a quantitative study could not.

Sample and Sampling

In-depth interview participants were drawn from community pharmacists from a major chain retailer. These pharmacists were from both rural and urban areas of the state of Mississippi. Additionally, the pharmacists varied in the amount of years practicing in order to account for variation of experiences and training.

The pharmacists participating in this study were contacted by an intermediate source, the retailer's healthcare coordinator for Mississippi. The researcher gained permission from the corporation to approach its pharmacists to participate in this study. This organization was asked to distribute an informative recruitment flyer to pharmacists. The flyer instructed interested pharmacists to contact researchers.

This particular population was chosen for multiple reasons. Mississippi is leading in the number obesity diagnoses; therefore, this condition is a primary concern for pharmacists in all parts of the state. Additionally, the region of Mississippi in which the interviewees live was considered. By extending an offer to participate in the interview to pharmacists across the state, it increased the likelihood of having a wider network for later implementation studies.

Data Collection

Data collection took place in two phases. In phase one, pharmacists who expressed interest in participating in the interviews was asked to complete a brief pre-interview survey. This allowed the researcher to have some data to tailor the interview questions to the pharmacist's described situation and to conduct a more organized and efficient interview. Pre-survey questions included:

1. How many years have you been in the community pharmacy setting?
2. On average, how many prescriptions does your pharmacy fill per week?
3. Does your pharmacy currently have a private area that could be designated to meet with patients?

4. Do you have space in your pharmacy for group patient meetings?

The second phase of data collection included the telephone interview. Telephone interviews were chosen as the data collection approach for this study because they allowed for the participation of pharmacists who are remote from the University of Mississippi. Some may hesitate to use this type of communication because of the lack of being able to recognize facial cues and body language with this method; however, there is currently little evidence suggesting that an in-person interview holds significantly more value over the telephone conversation (19). This phone call was recorded via an online recording service, freeconferencecall.com. Once all the answers from the participants were collected, the interviews were transcribed using <https://www.trint.com/>. The researcher then went back over the data to make sure no transcription errors were made by the electronic aid. Interview questions included:

Part I

- 1) Based on your interactions with patients seeking weight management advice, what information do they need most?
- 2) Do you think patients would benefit more from one-on-one or group training on weight management?
 - a) If they choose group training:
 - i) How practical would it be to implement that in their pharmacy?
 - ii) How many patients per group?

- 3) How often would you like to meet with patients enrolled in a weight management program? (weekly, bi-weekly, monthly, quarterly, etc.)
- 4) How many of your current patients do you think would be interested in a weight management program?
- 5) What type of barriers do you foresee getting individuals to enroll in a weight management program?
 - a) How can that be combatted?
 - b) Advertise to a specific population? Could you utilize a technician?

Part II

- 1) How many pharmacists in your store do you think would be interested in a weight management program?
- 2) Ideally, patients would be matched with a certain pharmacist to build a trusting relationship for the duration of the weight management program. What problems would you foresee by saying patient A would only be working with pharmacist A rather than any pharmacist available?
- 3) If we were to implement this type of education program in the pharmacy, how much time could you realistically dedicate to being away from the dispensary in an average week?
- 4) Are there any efficiencies that could be implemented to increase this time?
- 5) Do you feel your technicians would be able to help in some areas of the weight management program, such as collecting information about the patient, payment, scheduling appointments, etc.?

- a) If yes, how would you arrange these new duties (i.e., have one primary technician responsible or have multiple technicians trained on the process)?
 - i) What changes to the technicians' regular duties would have to be made to ensure everything was being done effectively?
 - b) If no, what are some of the issues that would prevent them from helping in these ways?
- 6) From a documentation perspective do you think it would be easier to have patients fill out information electronically or via pen and paper?
- a) If electronic method preferred, do you currently have a computer, iPad, or tablet that you could use for this program?
- 7) Given the parameters of the program that you have already mentioned, how many patients do you think you could have enrolled in the program at one time?
- 8) Are there any details about the program we haven't yet discussed that you would like to add?

Analysis

Qualitative content analysis was used to interpret the data collected from the interviews. In particular, the researcher read and re-read the transcribed answers multiple times to first recognize common ideas and codes, then these ideas and codes were extracted and combined into common themes. In addition, the researcher also looked for ways the interviewees answered the questions in

ways that were not anticipated by the researcher. Once all of the themes had been identified and discussed amongst the research team, they were compared back to the transcript to ensure continuity and to identify the exemplifying quotations that will be outlined in the results section. Qualitative content analysis has been shown to be an effective way to analyze pharmacy data when the researcher uses a systematic approach; this study used the recommendations for content analysis outlined by experts in the area (20).

RESULTS

In-depth, semi-structured interviews were conducted with eight pharmacists practicing in the community setting to gain insight into the design of a community pharmacy based weight management program. Participating pharmacists' experience ranged from 5 to 13 years, with the majority of participants having worked ten or more years in a community retail setting. Additionally, the population of participating pharmacists filled an average ranging from 180 to 6,000 prescriptions per week at their current practice sites. Several themes were consistent across the conversations including pharmacists' perception of patients' needs, the structure of the program, and pharmacist's ideas about implementational needs of a community pharmacy based weight management program.

Pharmacist's Perceptions of What Patients Want To Know

This theme addresses the specific information that pharmacists believe patients would like to know more about and the ideas pharmacists have regarding what patient would want to know about the weight management program. Almost every pharmacist began the conversation with the initial impression of patients expecting a "quick fix" or easy solution to their weight issues. As one pharmacist stated:

“I think some people just really want a quick fix. And being at a pharmacy, you are kind of the quick fix people ... if they can't breathe, they get an inhaler and now they can breathe ... Weight loss is not always a quick fix thing. I think that could be a barrier [to a weight management program]” (pharmacist 6).

Furthermore, the pharmacists did not seem to think patients wanted lifestyle counseling tips, but rather recommendations on the best over-the-counter weight management supplement. As one pharmacist stated, “To be honest, they want to know where are those magic pills they saw on TV. They don't really ask anything about ... what is the best way to lose weight” (pharmacist 3). Another pharmacist worried that the open physical structure of the pharmacy prevented some people from asking for help saying, “... some people, they feel very hesitant to ask you questions if they think other people are listening or they think you know nothing about it because you know they perceive you as not having a, you know, a weight problem” (pharmacist 6).

In addition to addressing what pharmacist perceived patients wanted to know surrounding weight management, they went on to describe what they think patients should be asking. Pharmacists said patients, “... may not know that they need this, but I think the biggest problem is like diet. They need to know like how to count calories” (pharmacist 5), and, “I think that [what patients] really need to know about would be fitness goals and that it's okay to start small” (pharmacist 4).

Program Structure

In order to build the ideal program for pharmacists, structural components like recruitment, patient matching and management, interaction setting, and meeting frequency must all be addressed from the pharmacists' perspective. Within this larger theme of program structure, four sub-themes have also been outlined.

Recruitment

The recruitment sub-theme has been broken down into two parts. The first part deals with the mechanics of deciding which pharmacy team members will approach patients who are candidates for a weight management program. Most pharmacist respondents suggested a select person, or a few people, should be trained and entrusted to help with the process of enlisting patients to participate in the program. Respondents made arguments such as, "you really want to pinpoint your technician who's going to be most excited about a program like this to dive in and help" (pharmacist 7), and, "I wouldn't say all of the staff because then I feel like it would just get looked over. Everyone thinks the other person's doing [it], so maybe just like one or two [people]" (pharmacist 5). Additionally, another pharmacist pointed out that it would be easier to find coverage for one person, as compared to a team, when undergoing training for implementing the program. To address a downside to having fewer staff trained for this program, such as potentially limited patient recruitment opportunities, one pharmacist suggested to also, "have some information available, already printed out, so if

[trained staff] can't spend time with [the patient] one on one, [other staff] can at least hand them like a brochure or like a flyer about it.”

Within the second part of this sub-theme pharmacists' expressed trepidation towards approaching potential patient participants in an appropriate fashion. One pharmacist stated, “I would hate to single out somebody just because of a general appearance that they might need, you know, diet and exercise things” (pharmacist 3). Rather this pharmacist went on to suggest that perhaps:

“...we might be able to start it off with people who have diabetes and have high blood pressure and say, “hey you know I know that [your doctor] talks to you about this... But there are a lot of things you can do with diet exercise to help counteract the issue to the point where you might not need medication anymore ... That would ... be our first step ... to pinpoint people who [because of] their disease state would greatly benefit from a diet and exercise regimen” (pharmacist 3).

Another recruitment tool recommended based on respondents' previous practice experience was the idea of developing an evaluation tool to better gauge patient's interest in such a program saying:

“You're going to have to do some type of assessment with people beforehand to really gain their level of interest and level of commitment. Because I think that either we could have a lot of people you know be like gung-ho and sign up for [the weight management program], but their level

of commitment is not there and then we've wasted the time to get them signed up" (pharmacist 3).

Matching and Managing Patients

When asked to address possible barriers to matching patients and specific pharmacists for the duration of the proposed weight management program, pharmacists suggested a variety of things including meeting time inflexibility, personality clashes, and lack of variety in advice given. However, the majority of respondents agreed that matching patients and pharmacists would not be overly problematic, as one pharmacist said, "I think that eliminates a lot of the barriers that I would see if you could pair them up specifically with one pharmacist because that pharmacist is going to know his or her schedule" (pharmacist 7). Moreover, assigning a patient to the same pharmacist would assist with the development of the pharmacist/patient relationship. As one pharmacist pointed out, "Most people want to have the same person every time. I would if it was me..." (pharmacist 6).

When asked how many patients pharmacists could enroll at the beginning stages of the weight management program, more than half of the pharmacists specifically stated they would be able to manage 5 patients. The reason for this number was that pharmacists were not sure what the program would entail from a paperwork perspective and wanted to make sure it was a reasonable number until they better understood these requirements. As one pharmacist said, "Until

you got it figured out and figured out how to do it, and maybe you were a little more proficient,” five would be the maximum number of patients.

Interaction Setting: one-on-one vs. group

When asked about the kind of meetings patients would prefer the pharmacist respondents did not have a clear consensus on whether the patient would prefer a group or one-on-one setting; rather, most mentioned the idea of a combination of both meeting types. As one pharmacist said:

“It would need to be a combination thing because with some people they're going to need the support of a peer, someone you know they can make friends with, in the group and the accountability from the group. But they're also going to need those one on one things to really help pinpoint where they're going wrong because you don't want to discourage someone when they're in a group setting saying OK you probably did this wrong this week. And then that could cause them to feel embarrassed because they're in a group setting and never come back right.”

(pharmacist 3).

Meeting Frequency

There was also not a definite answer on how often the patient should meet with the pharmacists to discuss their progress and receive more educational materials. However, several pharmacists suggested the idea of a graduated

program with frequency of meeting dependent upon the progression of the course. One pharmacist said, “So weekly [meetings] for a certain period until they have a pattern going down and then switching to either bi-weekly or monthly depending on how difficult their lifestyle changes have been for them” (pharmacist 2). An alternative popular answer was meeting bi-weekly, regardless of where in the program the patient falls. A pharmacist with this perspective said:

“Maybe once every two weeks because I think weekly may be too much in and it may be hard to see signs of progress. Every two weeks I think is a good interval and every month, you know, they may stray from their habits. And I feel like they would need something like more often to keep a reminder and to keep them committed to something” (pharmacist 1).

Some creative ways for patients to still be engaged between official meeting times were also suggested. One pharmacist said, “something like a Facebook group or something where they could keep track of everyone. Or to keep them updated or motivated throughout the whole ... and I guess we could schedule like meetings where you could work out in a group fitness class together” (pharmacist 1).

Pharmacist Implementation Needs

In order to successfully implement this program, pharmacist respondents identified that current workflow and educational inadequacies would need to be addressed.

Workflow Adjustment

Given the current nature of community pharmacy practice, each pharmacist was asked to consider how a weight management program could be implemented within their current practice structure. There were several efficiencies suggested to allow this consultation service to be successful and sustainable, including: manager support, overlap coverage, technician integration, flowcharts, deadlines, bag tags, and streamlining in-person visits. Several respondents mentioned the importance of the pharmacy manager and staff championship for this service expressing things such as, “it would take buy in from everybody in pharmacy” (pharmacist 4) and “[Implementation of the program] would depend on the pharmacy managers desire to implement it” (pharmacist 2).

Pharmacists also addressed the need for this weight management program to be implemented when multiple pharmacists were on duty, making statements like, “Making sure that we make the appointment times for the patients whenever there's a second pharmacist on duty” (pharmacist 7). Furthermore, technician utilization in this program was said to be crucial, stating that technicians, “could ... get the patient engaged and excited then collect some

preliminary information so ... that you have more impact the amount of time you spent with the patient” (pharmacist 4). Another pharmacist suggested technicians could “maybe try to do some phone calls while typing or filling and or if it's something where the patient comes in the store, I would just have them work the front counter” (pharmacist 5). Additionally, one pharmacist made the point:

“[Technicians are] going to have to come up with their own kind of flow of things too. Because I can tell them how to do one thing one way and the way that I tell them to do it, it's not going to be the way pharmacist B is going to tell them to do it ... But It's going to achieve the same results.”
(pharmacist 7)

Pharmacists mentioned other ways to increase productivity by creating a flow-chart of an adjusted workflow so everyone knows the standard procedure, setting deadlines for each step to ensure progress is being made, and utilizing bag-tags to target eligible patients when they come to pick-up medications. When thinking about how to capitalize on in-person visits, one pharmacist said,

“... One of the things we're doing currently with MTMs is we'll have people make some of the calls and collect information from patients in advance and have like one person that kind of works up a list [saying] these are the things you need to go over with this patient and then we get to the store and attach it to the patients bag and then when the patient comes in, the pharmacist ... has a little worksheet typed up with informational packets for the patient attached so you can go up and then talk to the patient about

those key things that they expressed an interest in or had questions about during a phone interview” (pharmacist 4).

Education

Most respondents also felt they needed additional training in weight management. One pharmacist said, “Just training would probably be the biggest thing because I can tell them all day long about healthy lifestyle and healthy eating habits. But until I can tell them practically with practical ... takeaways that make sense, then that it's not going to really sink in” (pharmacist 7). Another pharmacist commented about their hesitancy to engage patients by stating:

“Pharmacists are somewhat trained about weight loss and what you are supposed to do. But we are not continually trained about that. Unless you yourself or someone you know has been on some like uh, has actually been really strict about something or gone through a weight loss situation. Then you may not you may not know exactly all the different ways that would be beneficial to helping someone” (pharmacist 6).

The solution to this barrier proposed was to be given training guidelines and material prior to advising patients. Furthermore, this can ensure all pharmacists are giving consistent, reliable information. More specifically, this pharmacist said:

“[Pharmacists] would need to be a lot of standardization in the materials used and kind of a structure to what you cover each meeting. Just to be consistent across the care providers or educational providers. Because if

there's not kind of a guideline of what you're going to go over, then you know you could talk about completely different things" (pharmacist 4)

DISCUSSION

The focus of this research was to interview Mississippi community pharmacists and gain their perspective on a systematic approach to delivering weight management services to patients. In the analysis of the interviews, three themes (pharmacists' perception of patients' needs, the structure of the program, and pharmacist's ideas about implementational needs) were defined as critical to the creating a weight management program that would work within the community pharmacy setting.

Shifting Pharmacists' Perceptions

Under the theme pharmacists' perceptions, it seemed that overall pharmacists' respondents suggested that they felt patients only intended to seek advice about a quick and easy solution for weight loss, such as an over-the-counter or prescription strength drug recommendations. This mindset is slightly at odds with another weight management investigation based in Texas that showed pharmacists were at least somewhat comfortable providing patient counselling on prescribed antiobesity medications (21). Acknowledging this mindset discrepancy, it should be considered that, generally, in-depth interviews allow the respondents to have more candid and open-ended conversation (22). Additionally, it could be concluded that patients in Mississippi might want to

receive different information from their pharmacists than other parts of the south. Furthermore, patients may not be seeking advice regarding lifestyle changes as they do not understand the scope or value of a pharmacist's clinical knowledge, because patients have not historically been offered these services by pharmacists due to other factors like time constraints (23).

Structuring the Ideal Program

Based on the previous experiences of the pharmacists interviewed, the most important factors to consider when developing this consultation service were recruitment, patient matching, patient management, interaction types, and meeting frequency. Recruitment efforts that are driven by a few pharmacy staff members, rather than the entire team, have been shown to be successful in the past when implementing Medication Therapy Management services (24).

Moreover, respondents suggested that pharmacists should have an established and systematic way of targeting patients to enroll in the program. Previous tailored recruitment efforts targeting patients with multiple comorbidities (i.e., diabetes and high blood pressure) have been shown to be a productive starting point in launching a new program (25).

Additionally, in early implementational stages, pharmacists interviewed for this project felt more comfortable managing a smaller number of patients.

Similarly, pharmacists in a developing country, who are not familiar with implementing some of the interventions within their scope of practice, thought having a phased approach most beneficial (26). This system of slowly

implementing a process leads to more prepared pharmacist, more meaningful patient interactions, and increased chances of sustainability of the program.

A combination of one-on-one and group interactions could be considered when building this weight management program. One-on-one interactions allow the patient to get personalized feedback and disclose information that could be uncomfortable to talk about around multiple people. However, pharmacists have limited time to step away from dispensing responsibilities. Therefore, a group setting, if the pharmacy has space, could be used to give general information to many patients at one time leading to more meaningful future one-on-one meetings. In the development of past lifestyle modification groups for patients with obesity, this combination approach has been shown to not only increase the weight lost but encourage personal dedication to future loss, peer support, and overall better quality of life (27).

There was little consensus on the frequency of meetings. Patients could participate in a graduated system where time between consultations increases as they progress through their weight management goals. Alternatively, patients could meet every-other week to allow implementation of changes and progression between meetings.

Addressing Implementation Needs

Pharmacists felt workflow adjustments and educational material were essential for their success in implementing a weight management program. A specific process of how the workday proceeds, termed workflow, happens in

each pharmacy practice site. The pharmacy managers desire to implement the program will affect the adoption by staff and sustainability of the service. Patient meetings should be scheduled while multiple pharmacists are working, or when there is overlap coverage. Technicians should also aid with patient recruitment, help to collect basic patient information, schedule appointments, and perform pre-assessments. In doing so, pharmacists will be able to maximize their limited time by focusing specifically on interactions with the patients.

Since this program would be a significant change in work flow for the pharmacy staff, utilizing flowcharts to show the systematic approach for program implementation could help promote adoption of the service. In addition, deadlines to reach each program step could motivate employees to remain engaged in offering the service. Attaching notifiers to prescription bags could alert technicians during patient checkout that pharmacists wish to have a targeted interaction with that patient. This targeted approach, alongside pre-workups completed by technicians, could help streamline in-person encounters.

As pharmacists felt that their personal knowledge regarding weight management could require supplementation, educational materials specific to the weight management program should be developed. In particular, an introductory course about the program structure and the informational health components should be offered. This will ensure all patients in the program are receiving consistent information, and a personalized approach within the structured curriculum. Informational packets and/or continuing education modules should be distributed containing recent literature findings, gold standards of nutritional

knowledge, and trusted clinical guidelines for pharmacists to reference for patient consultations.

Relevance

This exploration of pharmacists' perceptions of a weight management consultation service could potentially expand the role of pharmacists, be a useful model for other consultation services' development, and improve health outcomes for patients with obesity. Similar to the implementation of immunizations, pharmacists can change their perceived health professional role to include weight management consultations services (28). While this study addresses the specifics of a pharmacist's ideal weight management program, the findings can be generalized to implementing any new consultation service. Similar implementational needs could be present in other services. In addition to increased patient health outcomes, this weight management program could potentially save the healthcare system money (8). Trust for America's Health predicts 16 billion dollars of healthcare savings within by yearly investing \$10 per person on proven community-based intervention that align with nutrition and physical exercise (29). Lastly, while other pharmacist-led weight management services have been piloted in the past, none have lasted long-term (17). By proactively gaining pharmacist's perspectives before implementation, a program could be designed that minimizes barriers and becomes sustainable.

Limitations

There are a few limitations that must be considered when interpreting the results of this study. An in-depth interview was conducted with eight pharmacists working for the same major community retailer in Mississippi. In order to provide more generalizable outcomes for the program development, a broader population of pharmacists from varying workplace settings should be included in the future. Further questionnaires could also be used to confirm structural components related to interaction setting and meeting frequency.

CONCLUSION

Currently, community pharmacists do not routinely offer weight management consultation services to aid in the large number of individuals being diagnosed with obesity. After analysis of the pharmacists' in-depth interviews three major themes were identified for the development of a community pharmacy centered weight management program: pharmacists' perception of patients' needs, the structure of the program, and pharmacist's ideas about implementational needs. The findings of this investigation could be used to build a weight management consultation service that fits within the community pharmacy workflow and sustainable.

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