

ABSTRACT

Objectives: This qualitative research supported by the Community Pharmacy Foundation addresses the public health issue posed by diabetes and comorbid asthma, and the additional impact of obesity. Specific objectives were to gauge the relative level of burden posed by the self-management of these conditions (e.g., effective medication use, exercise, and dietary adherence) and the role of pharmacy in aiding this.

Methods: Adult respondents from across the country participated in two separate online bulletin board (OBB) discussions for approximately two hours spread over the course of a day, whenever convenient to them. One group comprised patients with asthma only (N=22), the other with patients with both asthma and type 2 diabetes (N=19). Both groups were screened to include patients with obesity (BMI>30); representing a mix of ethnicities, geographies, and socio-economic status. All had filled prescriptions for asthma or diabetes at a community pharmacy.

Results: Pharmacists were perceived to play only a limited role in asthma and/or diabetes management beyond dispensing medications; relying on primary care physicians for information and guidance. When prompted, information and guidance gaps were revealed that could be fulfilled by pharmacists and/or nurse practitioners affiliated with community pharmacies.

Conclusions: This study provides insight into the functional and emotional burdens of comorbid asthma, diabetes and obesity. Respondents acknowledged the importance of their own self-management of these conditions and this research suggests some areas in which community pharmacies could play a more proactive and expanded role in mitigating this burden and facilitating self-management.

INTRODUCTION

- Diabetes is a chronic condition that affects over 29 million people in the US,¹ and is associated with multiple chronic comorbidities, including cardiovascular disease, depression, and respiratory diseases (including asthma and COPD).²⁻⁵
- Patient self-management, including medication adherence and lifestyle modifications, is *essential* to achieving desired outcomes. However, diabetes self-management can be complicated by the presence of comorbidities such as asthma and/or obesity.
- Research into the effective self-management of multiple comorbidities with diabetes is lacking, including the relationship between diabetes/obesity and asthma.
- In one qualitative research study of African-American women with asthma, asthma management “took a backseat” to the diabetes. Further, asthma affected exercise tolerance which further impacted the management of their diabetes.⁶
- Our prior research has highlighted the low levels of asthma medication adherence in the community pharmacy setting.⁷

OBJECTIVES

- The aim of this study was to explore the burdens placed on patients with asthma, diabetes and obesity, and the role of community pharmacy in supporting their self-management of these conditions.
- Themes identified from this qualitative pilot study will inform the development of a larger study to test interventions to improve self-management in patients with diabetes and comorbid asthma.

METHODS

Sample:

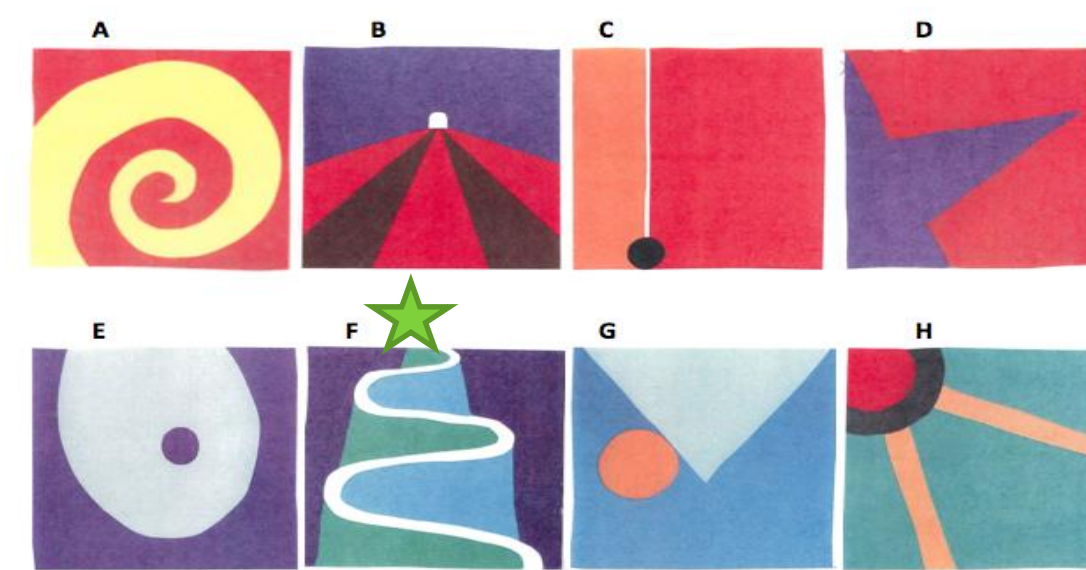
- Convenience sample of patients with asthma (**N=22**) or asthma and comorbid type 2 diabetes (**N=19**) who had taken medication for their condition(s) within the past year (filled at a community pharmacy).
- Cohort included a mix by gender, age, race, ethnicity, employment status, annual household income and asthma and/or diabetes medication type.
- Included a subset of obese participants with BMI above 30 kg/m²
- Patients recruited by a contract research organization (CRO), *Marketing and Planning Systems/ Kantar*.

Procedure:

- Study protocol and consent forms reviewed and determined to be exempt by the University of Utah IRB.
- Experienced health researchers from the CRO moderated the discussions.
- Patients participated in either of two day-long online bulletin boards (OBBs) specific to their asthma and diabetes status – Asthma only; Asthma + Diabetes.
- Patients received an industry standard honorarium.
- Patients completed approximately 2 hours of online interviewing on the day in response to posted questions to the panel, and to individual prompts.

Discussion Guide:

- Discussion topics included current health status, steps taken in disease management, satisfaction with their current management of their condition(s), their own role and the role of health care providers in self management (including pharmacy), and their future health status and needs.
- For the Asthma + Diabetes participants, additional questions regarding co-management of the conditions and prioritization were asked to assess any additional burden or unmet needs.
- Projective exercises were used to elicit emotional responses: describing their condition as an animal; and selecting abstract art images to represent life with their condition(s) - moderators would probe to elicit the emotional impact on respondents.



★ Most common image selected, both groups

RESULTS

Pharmacists' Role:

- Patients reported that pharmacists currently play a limited role in asthma and/or diabetes management beyond dispensing medications.
- The majority are satisfied with this experience and trust their pharmacist to prepare their medications properly, timely and answer any questions they may have.
- Only a few mention getting recommendations or demonstrations from their pharmacist.
- Physician reliance may be one of the reasons they don't look to pharmacists as resources.

“I have **not spoken to the pharmacist** because of the information I receive from my doctors. If I had questions, I would definitely ask.”

“The **doctor didn't say anything** about managing **both asthma and diabetes**. I haven't been provided with **any information** regarding having both conditions together.”

Cormorbidity:

- Patients acknowledged that both conditions are “long and winding roads” with ups and downs, and that medication **adherence** is a necessity for both asthma and/or diabetes control.
- The constancy of monitoring and the lifestyle changes with respect to food that characterize diabetes outweigh the unpredictability and resulting fear associated with asthma.
- Overall, patients did not report having significant unmet information needs on asthma and/or diabetes, as they believe these are met by their primary care physician.
- **Weight loss** is more top-of-mind as a goal to help improve overall health. Most see a connection between their weight and their asthma and/or diabetes control.
- Respondents were likely to note not being able to exercise fully or being short of breath with minor activity as a challenge due to their asthma. This may limit their ability to meet their activity goals to improve overall fitness (and manage diabetes).
- **Diabetes has a greater impact** on their day-to-day quality of life and creates **more self-management challenges** compared to asthma.
- When prompted, patients acknowledged **information gaps** that could be fulfilled by pharmacists - particularly in a grocery-centered pharmacy where patients obtain their foodstuffs.
- These include **behavior modification, managing an active lifestyle with asthma, and dietary recommendations for weight control** (important to manage both asthma and diabetes)

“I would say the greatest challenge I have in managing my [asthma] is the uncertainty. You never know when it will flare up, even though I have a general idea of when it might...I think a **surprising challenge is gaining weight while having asthma**...I think my lungs are still generally as healthy as when I was younger, but the **weight puts an added burden** on them.”

- Furthermore, there may be unmet needs related to **monitoring, support** and **motivation** particularly for those with diabetes.
- When prompted, most **have not thought about a more expanded role for pharmacists**. However, most would be open to receiving additional advice or services as needed from their pharmacy.

“The **Pharmacy plays a small role** in managing my asthma; other than **dispensing the medication my doctor prescribes**. Perhaps the pharmacy **could be more proactive and assertive** in offering its opinions regarding the treatment of my condition.”

“I've **never really inquired** about what services my pharmacy provides that would be relevant to managing my asthma. I just trust them to be able to get my medications when I put in my orders”

“I'd like to see my pharmacy take a more **proactive approach** to helping me manage my asthma, through suggestions on medications, literature and a **stronger partnership with my doctor**.”

CONCLUSIONS

- This study provides a rich dataset on the burden of asthma and comorbid diabetes, and evocative imagery reflected a “winding road” with **significant emotional impact**.
- While engaged with providers and satisfied with their pharmacists in a dispensing role, respondents acknowledged **the importance of their own self-management** of both conditions.
- There are areas in which community pharmacists could play an expanded role in mitigating this burden and facilitating self management, through provision of **monitoring, and information and support** in helping patients maintain **lifestyle changes** that help with both conditions.
- Possible targets for intervention will be validated in larger quantitative surveys, and tested in self-efficacy theory driven interventions delivered through the community pharmacy setting.

SUPPORT

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