



## COMPLETED GRANT SYNOPSIS

### Qualitative Research into the Barriers for Effective Patient Self-Management of Comorbid Diabetes, Obesity, and Asthma

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#### Objectives

This study is a qualitative inquiry with patients with diabetes/obesity, and patients with diabetes/obesity and comorbid asthma to better understand the challenges they experience in the self-management of these chronic health conditions in terms of behaviors, healthcare system engagement, and medication adherence. This research is highly significant given the magnitude of the public health problem posed by diabetes/obesity and asthma, both of which require patient self-management skills to achieve desired treatment outcomes. This project, supported by the CPF, will satisfy program officers at NIH who have suggested that prior qualitative research with patients will provide key data to inform future federal R01 applications. These applications will leverage quantitative research, and behavioral theory to design and test (through interventions) models of the relationships between diabetes/obesity and asthma and the self-management of these conditions in the Community Pharmacy setting.


**Specific Objectives** of this qualitative research project were to: (a) Qualitatively interview adult patients with diabetes/obesity, and gauge the level of burden posed by the self-management of these conditions and the self-identified factors that facilitate or detract from successful self – management (e.g., effective medication use, exercise, and dietary adherence); (b) Among those patients with co-morbid diabetes/obesity and asthma, to determine the degree to which managing the multiple conditions poses additional burden, and how patients prioritize and balance their effort at managing the respiratory disorder in addition to diabetes/obesity; (c) Identify factors that impact successful self-management that may be amiable to intervention in the Community Pharmacy setting that are common to diabetes and asthma self-management, and factors that impinge upon successful self-management that are unique to each condition. These factors will reflect the experiences of patients, and the emotional impact of these conditions on the patients’ quality of life and health outcomes; and be prioritized according to the opportunities and barriers they represent for intervention in the Community Pharmacy setting – in terms of potentially satisfying community pharmacists’ professional and business goals while providing enhanced care.

#### Methods

Design	<ul style="list-style-type: none"> <li>• The study protocol and consent forms were reviewed and considered as exempt based on applicable guidelines involving the ethical treatment of human subjects by the University of Utah IRB.</li> <li>• Adult respondents participated in two separate online bulletin board (OBB) discussions for approximately two hours spread over the course of a day, whenever convenient to them. They were able to log on to answer initial questions posted to the board, and also to respond to moderator follow-up questions. Respondents received an industry-standard honorarium for their participation in the discussion. A market research contract research organization was responsible for recruiting the patients, and hosting and moderating the OBB discussions with investigator oversight.</li> <li>• One group comprised patients with asthma only, the other with patients with both asthma and type 2 diabetes. Both groups were screened to include a number of patients with obesity (BMI&gt;30). Groups’ participants came from a mix of ethnicities, geographies, and socio-economic status. All were screened to have filled prescriptions for asthma/diabetes at a community pharmacy.</li> <li>• In total 24 qualified individuals with asthma only (free of type 2 diabetes) were recruited to participate in the asthma only board. Of which 22 completed the discussion on the day of the research (11/21/16). Twenty-three qualified individuals were recruited to participate in the asthma+diabetes discussion, of which 19 completed the discussion on the day of the research (11/29/16).</li> </ul>
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[www.CommunityPharmacyFoundation.org](http://www.CommunityPharmacyFoundation.org) and submit your inquiry through [Contact Us](#).

<p>Study endpoints</p>	<ul style="list-style-type: none"> <li>• 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 disease management (including pharmacy) in disease management, and their expectations for 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.</li> <li>• Several <u>projective exercises</u> were used to facilitate discussions regarding management of asthma and/or diabetes and bring out feelings associated with these conditions. These included describing their condition as an animal; and selecting abstract art images to define life with their condition(s) – in both exercises moderators would probe to elicit the emotional impact on respondents.</li> </ul> 
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### Results

- A comprehensive publication is in preparation with co-investigators from the University of Utah College of Pharmacy, College of Nursing, and the pharmacies at Smith’s Food and Drug Inc., Utah. This precludes a detailed exposition of findings here, beyond some general observations about the role of community pharmacists:
- This sample 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. A few mention getting recommendations or demonstrations from their pharmacist.
- Overall, patients do not appear to have significant unmet informational needs on asthma and/or diabetes, as they believe these are met by their primary care physician. Physician reliance may be one of the reasons they don’t look to pharmacists as resources. However, when prompted, there are information gaps that could be fulfilled by pharmacists - particularly in a grocery-centered pharmacy where patients obtain their foodstuffs. Respondents indicated these surround behavior modification, managing an active lifestyle with asthma and dietary recommendations for weight control (important to all participants as a way to manage both asthma and diabetes). Furthermore, there may be unmet needs surrounding monitoring, support and motivation particularly for those with 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.”*
  - *The greatest challenge I face [managing diabetes] is **keeping on track with my eating habits**. I've always used food as a comfort and I can't do that now. The most surprising challenge is how hard it is to eat healthy when eating out.*
  - *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**.*

### Conclusion

This study provides a rich dataset on the burden of asthma (and comorbid diabetes), and evocative imagery reflected a “winding road” with ups and downs and significant emotional impact. While engaged with PCPs, and satisfied with their pharmacists in a dispensing role, respondents acknowledged the importance of their own self-management of both conditions. Research suggested that there are some 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.