Assessing Doctor of Pharmacy Impact on Over-The-Counter Medication Selection

Jamie L. McConaha, Pharm.D., CGP and Jennifer Heasley, Pharm.D.

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Background

Pharmacists in the retail setting are one of the most readily available health care professionals. This puts pharmacists in a unique position to counsel patients not only on prescription medications, but also over-the-counter (OTC) medications. This is particularly important for OTC medications because purchasing these products may occur without guidance from any health care professional. With over 1000+ OTC brands falling into over 148 categories, the process for patients of choosing the best product for their specific needs can be confusing.[1] Despite this, many patients do not take advantage of a pharmacist's ability to make patient-specific recommendations regarding their over-the-counter medication purchases.

Since 1997, *Pharmacy Times* has been publishing a "Survey of Pharmacy Recommendations" to gather data on which OTC brands pharmacists recommend most frequently. In addition, how many recommendations per month pharmacists make, and whether patients take pharmacist recommendations are also assessed.[1] However, these reports do not assess other relationships between OTC counseling and patient outcomes, such as cost savings, the number of patients that change an already-selected item versus those that have nothing selected, or the number of patients that approach a pharmacist in the OTC aisle or at the pharmacy counter versus those that wait to be greeted in the aisle.

A 1996 study at Washington State University did address these concerns by showing the various relationships between pharmacy consultation and over-the-counter medication purchasing outcomes.[2] However, since that study, in June 1997 the Accreditation Council for Pharmacy Eduation (ACPE) adopted its *Accreditation Standards and Guidelines for the Professional Program in Pharmacy Leading to the Doctor of Pharmacy Degree*. In these guidelines, ACPE initiated the transition to the Doctor of Pharmacy (PharmD) as the sole professional practice degree for pharmacy in the United States. The timeline for implementation of the new standards required transition for the entering professional classes in academic year 2000-2001, and the transition was with the graduation of the last student from an ACPE- accredited baccalaureate in pharmacy program in 2005.[3] Therefore, no study has been done to assess the impact of OTC counseling by the more clinically-trained PharmD students, rather than baccalaureate pharmacy students, on therapeutic and financial patient outcomes.

Research Question and Objectives

What is the financial and medical impact of a pharmacy health care professional consultation performed by doctor of pharmacy (Pharm.D.) pharmacists/student pharmacists on over-the-counter medications in a community setting?

The purpose of the study was to assess the impact that PharmD degree pharmacists/ student pharmacists had on patient selection of OTC medications in five ways:

1.) Evaluate the effects of pharmacist/student pharmacist counseling on OTC medication purchasing decisions and costs
2.) Identify factors that influenced patient purchasing decisions following an OTC consultation
3.) Assess whether patients sought out pharmacist OTC counseling, or whether pharmacists/student pharmacists had to approach the patient
4.) Measure prevented OTC medication-related adverse outcomes following an OTC consultation
5.) Assess patient likelihood to seek pharmacist/student pharmacist OTC counseling in the future following an encounter

Methods

Currently, student pharmacists and pharmacists in retail community settings are sought after to provide recommendations on over-the-counter treatments. This can occur by several methods: (a) the patient approaches the pharmacy counter to ask the pharmacist about an OTC product (b) the pharmacist is approached while out in the aisle by a patient about an OTC product or (c) the pharmacist approaches a patient in the aisle if it appears that they may need help in choosing an OTC product. In the case of the latter, patients can either accept or refuse consultation. For the purposes of this study, if a patient refused consultation, they were still eligible to participate in the study as demographic information on those that accepted versus refused consultation was collected.

This study was conducted during normal pharmacy hours in five preselected pharmacy locations: three locations of a chain pharmacy and two independent pharmacy locations. Pharmacists at these locations as well as student pharmacists on their advanced community rotations were trained in a standardized manner using a Camtasia presentation on the study methods and instruments. Three instruments were utilized which are described below.

Instrumentation

Over-the-Counter Patient Consultation Record Sheet (Figure 1)

The Pharm.D. pharmacist/student pharmacist providing the consultation asked all questions on this Over-the-Counter Patient Consultation Record Sheet. The pharmacist/student pharmacist, not the participant, was responsible for recording all data on the record sheet. The instrument, shown in Figure 1, did not collect any patient identifying data, but rather generalized information (e.g. category of product the patient was inquiring about, patient symptoms, initial and final purchase selections, and whether or not the patient accepted the pharmacist/pharmacy student recommendation).

This sheet was filled out for every patient encounter, regardless of whether the patient decided to participate in the study. If the patient denied consultation after being

approached by the pharmacist/student pharmacist, only the "Encounter" section of the sheet was filled out, as no data was available for the remainder of the sheet. Those that denied consultation were still asked to participate in the study, and, if they agreed, filled out the *Over-the-Counter Demographic Sheet*. It is important to note that, in order to not alter a normal interaction between the pharmacist/student pharmacist and patient, this record sheet was filled out after the offer to counsel had been made and the consultation session completed.

Rationale for Recommendation Sheet (Figure 2)[4]

The Pharm.D. pharmacist/student pharmacist providing the consultation used this form to indicate the rationale for their OTC recommendation. This instrument, shown as Figure 2, allowed room for the pharmacist/student pharmacist to include a detailed explanation of the reason for their recommendation.

Over-the-Counter Demographic Sheet

The patients that chose to participate in the study, regardless of whether they accepted or refused consultation, were asked to complete this form. The patient, not the pharmacist/student pharmacist, was responsible for recording all data on the demographic sheet. This form was filled out anonymously and collected such demographic information as the *purchaser* gender, age, race, income, family size, education level, and the *patient's* prescription drug insurance status. This form was used to determine demographics of those that (1) received counseling and (2) those that refused counseling after being approached by the pharmacist/student pharmacist. Again, as to not alter any normal interaction between the pharmacist/student and the patient, the offer to participate in the study, and thus fill out this demographic sheet, was given after the interaction had taken place.

This project was approved by the Duquesne University Investigational Review Board and was supported by a grant through the Pennsylvania Pharmacists Association Educational Foundation.

Results

A total of 560 interactions were documented. Of these, 425 resulted in the patient accepting consultation (N=425). Of the 425 consultations that took place, the pharmacist/student pharmacist initiated 210 of these (49.4%). The most common OTC consultations surrounded cold/flu symptoms (N=108, 25.4%), followed by allergies (N=57, 13.4%). Other common healthcare needs included vitamins/supplementations (N=42), pain/headache (N=40), and first aid (N=24). The average consultation time was 4.8 minutes (range 2.2-14.4 minutes). Of the pharmacist/student pharmacist OTC recommendations made, 93.6% were accepted by the patient.

Before the consultation took place, 234 of the patients (55.1%) had not yet selected a product. Of those that had, 38.6% had selected a brand name product. After consultation with the pharmacist/student pharmacist, all but 23 patients left with a product in hand, the majority of those OTC products being generic name products (53.6%). This resulted in a cost savings to the patient, with the average pre-consultation OTC product costing $11.70 and decreasing to an average price of $7.53 after pharmacist/student pharmacist intervention.

Of the 135 patients that denied pharmacist/student pharmacist consultation, none consented to fill out the demographic sheet; therefore, demographic information was only available for those receiving consultation. Completed demographic information for those that received pharmacist/student pharmacist counseling revealed the following: that the majority of those receiving counseling were the patient themselves, the average age range was 40-64, and nearly all patients had prescription drug coverage.

Conclusions

In summary, this study shows that Pharm.D. pharmacists/student pharmacists have a positive impact on clinical and financial OTC purchasing outcomes. Patients that participated in this OTC consultation service provided positive feedback and reported that they were more likely to consult with their pharmacist regarding OTC purchasing decisions in the future. While more patients are recognizing the importance of utilizing their pharmacist's expertise and knowledge on OTC medications, more work is needed in this area to promote safe medication usage. Continuation of this project includes further investigation into both the consultant and patient demographics (gender, age, race) to detect whether this played a role into the patient acceptance of the pharmacist/student pharmacist recommendations, as well as plans to incorporate technology (i.e. iPads) in future OTC medication consultation activities.

References

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