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Medication Adherence Survey: A First Year Pharmacy Immersion Students' Perspective

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Cover Page Footnote

The author would like to acknowledge the partnership between UNC Eshelman School of Pharmacy and Moses H. Cone Hospital, which led to the Immersion students performing their first Immersion experience in the hospital. In addition, the author would like to thank Nita Johnston, PharmD, for her preceptor support and insights into this project.

Medication Adherence Survey: A First Year Pharmacy Immersion Students' Perspective

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Abstract

First year pharmacy Immersion students from University of North Carolina Eshelman School of Pharmacy used a three question survey during their rotation at Moses H. Cone Hospital that analyzed patients' medication adherence. Data collection revealed common trends that have been shown in the literature and areas for improvement. This method of evaluation was used by Phase I Immersion students to gain perspective on the problems we continue to have with medication adherence.

Introduction

Pharmacy rotations have consisted of students applying didactic learning with a shadowing experience in a hospital or ambulatory setting. New thinking and innovation has led some to believe that through increased immersion experiences, students can learn more by having a direct hands on approach. The University of North Carolina (UNC) Eshelman School of Pharmacy has implemented a new curriculum where their students spend more time in Immersion experiences in real-world, direct patient care as members of an interdisciplinary team.³ In the previous curriculum, students would spend a total of two one-month shadowing experiences during the summers between their school years learning about community and hospital pharmacy. Now, with the new curriculum, students spend a total of three two-month long experiences, learning about hospital, community and ambulatory care/in patient pharmacy in a more comprehensive manner. This year, as one of the first Immersion students completing rotations in Moses H. Cone Hospital, we had the opportunity to use surveys about medication adherence to learn more about the common problems patients face with adherence.

How well a medication works depends greatly on how often the patient takes it, and for healthcare providers and students, it is important to understand more about patient's medication adherence to better treat and provide care. Poor adherence to therapies severely compromises the effectiveness of the treatment being provided, making patient adherence a critical issue in population health both from the perspective of quality of life and of health economics.⁴ Studying adherence can be difficult, as adherence depends solely on the patient's behavior and motivations.¹ To try and improve medication adherence, one must first understand the factors that attribute to low medication adherence among populations. Using a short adherence survey as method of data collection, we wanted to examine and understand the self-reported medication adherence patterns of patients at Moses H. Cone Hospital and how this may vary among different age groups.

Methods

As first year pharmacy immersion students, one of our main projects for our first Immersion experience was a focus on medication histories. In conducting individual patient medication histories, we used this opportunity to utilize and ask patients a three question survey to better understand patient's medication adherence. The three questions consisted of the following:

1. **How many doses, on average per week, does a patient miss?** This was identified as excellent – meaning no doses missed, good – meaning only 1 dose was missed, sub-optimal – meaning 2-3 doses were missed and poor – meaning greater than 3 doses were missed.
2. **How does the patient remember to take their medications?** We reviewed specific modalities that patients use to remember taking their medications.
3. **Identify what factors, if any, affect the patient's medication use.**

These questions were asked to 109 patients that were either in the Emergency Department or admitted in Moses H. Cone Hospital, through a two week period from May 9th to May 20th, 2016. The survey was standardized and the two students who interviewed patients used the same script to minimize bias in the data collection. The data was then analyzed for trends and any possible correlations between the patient's answers, their age, or their sex.

Data Analysis and Results

More than half of the patients interviewed were over the age of 60 (61%), and almost three-fourths of those interviewed were older than 50, as seen in Figure 1. This is important to note, as older patients often receive treatment for several chronic health conditions and are commonly taking more medications than younger adults, factors that can greatly affect a population's medication adherence.⁴

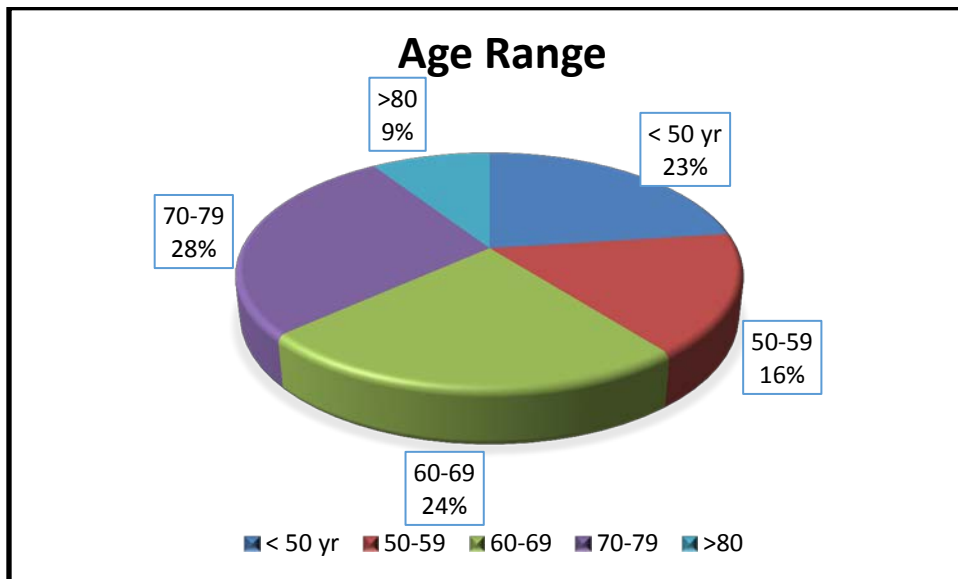


Figure 1. Age range of all patients interviewed. (61% age>60, No. Male – 47, Female – 62)

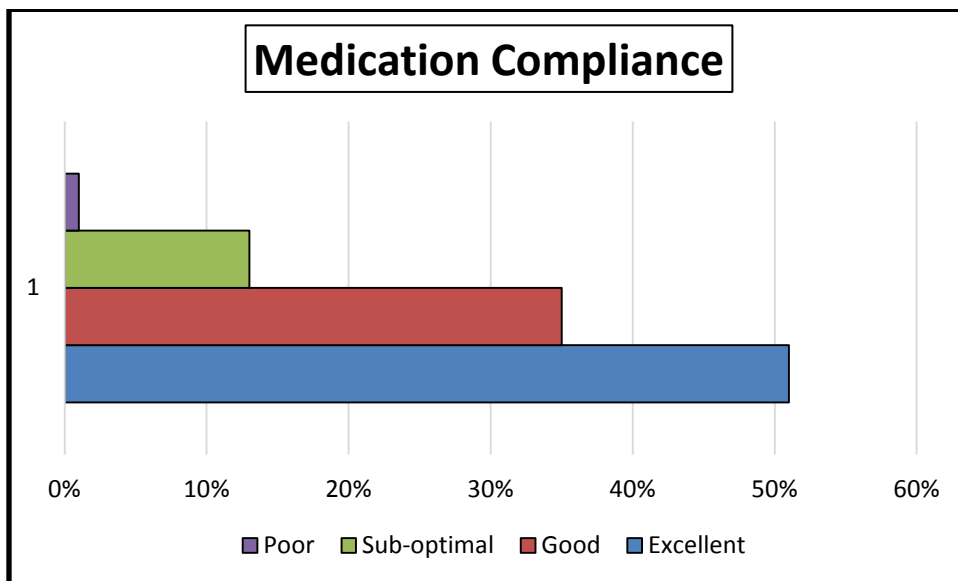


Figure 2. Survey results for question “On average, how many times a week do you miss a dose of your medications?”

Only 51% of our survey constituents stated they had excellent medication compliance, meaning they missed no doses per week. The remaining 49% were good, missing only one dose per week and the remaining constituents missed 2 or more doses. It is essential for all health care personnel to continue work to improve these numbers, and pharmacists can play a great role through communication and education of patients.

The most popular method that patient’s used to remember to take their medications was the pill box, as seen in Figure 3, especially those in the age group of 70-79 years. Alarms, although having a potential to be useful to patients, was the least used option for all, which warrants a potential area that may need to be explored for improved compliance and a better understanding of patients.

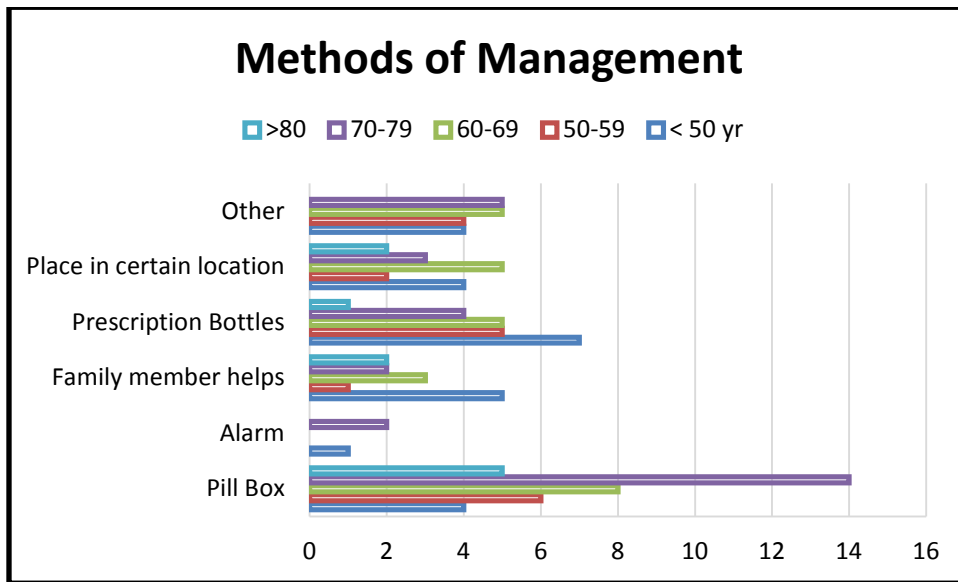


Figure 3. Methods that patient’s use to remember to take their medications.

For the final question of the survey, which asked what factors, if any, affected a patients use of medications, the “other” category was selected most and most likely represents the 51% of patients who remembered their medications without reminders.

Excluding this category as seen in Figure 4 the data suggests that side effects, cost and access to medications are still high contributors to poor compliance. Also, it is interesting to see how the effect of cost of medications is more important for younger individuals, and how the impact of side effects is pretty much constant throughout all ages.

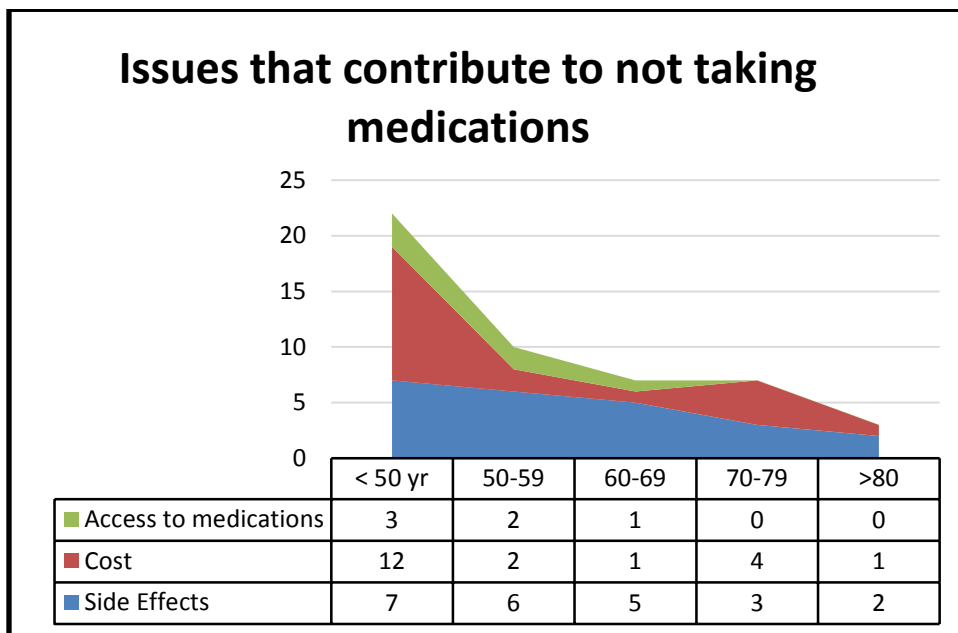


Figure 4. Patient indicated issues that contribute to them not taking their medications.

One thing to keep in mind while analyzing the data that was collected is that patients generally want to please their doctors or health care providers, and will often say what they think they want to hear.² It has been noted that patients improve their medication-taking behavior 5 days before and after an appointment with a health care provider, which is known as the “white-coat adherence”.² This phenomenon can be especially challenging when doing a survey, and all the data that is being collected is based on the patient’s own reports of their medication use. It would be interesting to see if the results changed if we had not identified ourselves as pharmacy students.

The results of this medication adherence survey show that there is certainly room for improvement in patient’s medication adherence. It is imperative for all healthcare workers to be aware of the situation, get educated and provide education to their patients about the importance of proper medication use. All health care providers can have a significant impact by assessing the risk of nonadherence and delivering interventions to optimize patients’ adherence.⁴ As students, it is important for us to be educated on patient’s medication adherence, methods to improve it and what works specifically for some patients but not for others to best treat these patients. This immersion experience truly gave us the opportunity to be more involved with patients at an earlier time in our pharmacy education, and to work first hand with patients with sub-optimal and poor adherence. In all, the data collected indicates a need for more patient education in regards to medication adherence, so that all patients can receive the best care possible.

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