OPINION & KNOWLEDGE OF NEW AND UPDATED TREATMENT GUIDELINES: A SURVEY OF SENIOR DOCTOR OF PHARMACY STUDENTS

Dejene Woldemariam, Shanu Eapen, *Bisrat Hailemeskel

2300 4th Street, NW, Washington, D.C. 20059.

Abstract

Healthcare profession students are expected to update their treatment guideline knowledge regularly to provide efficient patient care. However it is not sure how many of those healthcare students actually update their knowledge of treatment guidelines regularly. The objective of the study is to determine knowledge and opinion of senior doctor of pharmacy students in keeping up with new or updated treatment guidelines. The target population was senior doctor of year pharmacy students of Howard University and 35 (57.3%) of them participated. A survey consisting of sixteen questions with ten "Opinion Questions" and six "Knowledge Questions" were administered. The mean score for knowledge question section was 3.17 (52.8%) with a range of one to five. About one out of five (17.1%) of the participants said they were not familiar with the term treatment guideline. Although 77.1% said it is important to update themselves on new guidelines, only 48.6% of them said they are able to keep up with new guidelines. About three-fourth (71.4%) of them said the length of the guidelines discourages them from updating their knowledge. Overwhelming majority (94.1%) of the students prefer to have instructors include treatment guideline updates and 54.3% said it is the responsibility of the professors to update the students. Lack of familiarity with treatment guidelines (17%) and lack of self-initiative to update their knowledge (54.3%) prevents students from effectively keeping up with new treatment guidelines. This apathetic attitude can negatively affect the students' ability to provide effective patient care after graduation.

Keywords: Treatment guidelines, Pharmacy students, Updating knowledge, Opinion.

Introduction

National Heart, Lung and Blood Institute defines clinical practice guidelines as statements that include recommendations intended to optimize patient care that are informed by a systematic review of evidence and an assessment of the benefits and harms of alternative care options [1]. There is no clear consensus on how new treatment guidelines should be updated. Some scholars believe that guidelines should be updated whenever new information becomes available. However others prefer to wait until full update of evidence-based data is available. Clinical practice guidelines provide healthcare professionals with directions regarding diagnosis and treatment of various medical conditions. Healthcare professionals are expected to update their knowledge on treatment guidelines in order to provide efficient patient care. Along with healthcare professionals, students who

Author for Correspondence:

Dr. Bisrat Hailemeskel,
2300 4th Street, NW,
Washington, D.C. 20059.
Email ID: bhailemeskel@howard.edu

train to be a healthcare professional are also expected to update their treatment guideline knowledge regularly. However it is not sure how many of those healthcare students actually update their knowledge of treatment guidelines regularly. One of the subsets of healthcare students is pharmacy students. The objectives of this paper is to give an overview of the treatment guidelines published in the last couple of years and to determine if senior year doctor of pharmacy students regularly update their knowledge of treatment guidelines. There are no known previous studies that answer this objective.

Overview of guidelines

Clinical guidelines are usually produced at national or international levels by medical associations or governmental bodies, such as the US Agency for Healthcare Research and Quality[2]. Adaptation of high-quality clinical practice guidelines for local use is considered as an efficient means to improve acceptability and applicability of evidence-informed care [3]. USA and other countries maintain clinical guidelines at National Guidelines Clearinghouses (NGC). The mission of NGC is to provide health professionals, health care providers, health plans, integrated delivery systems, purchasers, and others an accessible mechanism for obtaining objective, detailed information on clinical practice guidelines and to further their dissemination, implementation, and use [4].

Globally, there are a number of new or updated clinical guidelines published every year. Most of these guidelines are published by US based organizations. Some of these guidelines are specifically intended for certain healthcare professions [3]. For instance in 2013, out of 185 new or updated treatment guidelines published in USA, 21 clinical guidelines are intended for pharmacists. Similarly in 2012, there were 361 treatment guidelines published of which 53 clinical guidelines were aimed for pharmacists. In the past five years, on average, there are over 290 new treatment guidelines published every year in USA alone. Likewise, the five year average number of treatment guidelines that are for pharmacists alone is 34. As a healthcare service provider, a pharmacist is expected to make evidence-based therapeutic decision based on the most updated clinical guidelines. In order to keep up with latest updates, a pharmacist is expected to review all applicable clinical treatment guidelines.

Materials and methods

This cross-sectional study was conducted at Howard University College of Pharmacy. The target population (n =61) is senior doctor of pharmacy students, of whom 35 participated. A survey consisting of sixteen questions were distributed to the study participants. The survey was divided into two parts, "Opinion Questions" and "Knowledge Questions". Opinion questions section comprised of ten questions to assess students' opinion of regularly updating knowledge of the treatment guidelines. The student opinions were assessed using a Likert Scale with 1 being in strong agreement and 5 being in strong disagreement. The knowledge questions section comprised of six questions to assess students' knowledge about four of the recently updated treatment guidelines. The four treatment guidelines were JNC8 for hypertension, ACC/AHA for blood cholesterol, American Diabetes Association's for diabetes treatment, and HIV/AIDS treatment guideline. The guidelines were chosen due to high prevalence of the disease states corresponding to the chosen guidelines in the Washington D.C metropolitan area. The surveys were given to pharmacy students at the beginning of the colloquium session. The data were recorded and analyzed using IBM SPSS Statistics 22.

Results

A total of thirty-five students participated in this study. Though the participants participated in the study were ethnically diverse, the majority were African Americans. Three out of the thirty-five respondents didn't fully complete the survey and the unanswered questions were considered as wrong answers for the knowledge section. The mean score for knowledge question section was 3.17 ± 0.98 (six being the perfect score) with a range of one to five.

When participants were asked if they are familiar with the term and process of treatment/practice guideline, 17.1% of them responded that they are not. When they were asked if the students keep up with the new/updated treatment guidelines whenever it is published, 51.4% of the students either don't have any opinion or don't keep up with the treatment guidelines when it is published.

Questions three to ten asked for students' opinion on various reasons that might prevent them from updating their knowledge of treatment guideline. About 75% of respondents said it is hard to keep up with new guideline updates after integrated therapeutics courses are over. Over 88% of the students said they don't think guidelines are just for physicians. 71.4% of the students said the large volume of the treatment guidelines discourages from updating their knowledge. Even though about 63% of the students said it is the student's responsibility to update their knowledge of treatment guidelines, 54.3% said it is the responsibility of the faculty/professors to update them on treatment guidelines and 94.1% of the students prefer to have instructors include treatment guideline updates as part of topic discussions during colloquium sessions. About seventy-seven percent of the respondents said the fact that treatment guidelines not being tested on NAPLEX didn't affect their motivation to review treatment guidelines and 67.6% of the students said their preceptors use updated treatment guidelines on senior year rotations.

The answers of the knowledge question section were used to determine what guidelines are students most proficient in. First two questions of the knowledge section were from JNC 8. Third and fourth questions were from ACC/AHA Blood Cholesterol guideline. Fifth and sixth questions were from American Diabetes Association's diabetes treatment guideline and HIV/AIDS treatment guideline respectively. 85.7% of the students gave the right answer for the first JNC-8 question, but only 42.9% gave the right answer for the second JNC-8 question. Majority of the students gave right answer to ACC/AHA Blood Cholesterol guideline questions with 85.3% and 60% respectively. While 67.6% of the students gave the right answer for the American Diabetes Association's diabetes treatment guideline question, only 38.2% gave the right answer for the HIV/AIDS treatment guideline question.

Discussion

The goal of the study was to determine if senior year doctor of pharmacy students update their knowledge of new/updated treatment guidelines. Nearly one out of five of the study participants said they were not familiar with the term treatment guidelines. Since treatment guidelines have been discussed throughout the curriculum we expected 100% of the participants to be familiar with the term treatment guideline. Almost 51% of the study participants said they were not keeping up with new clinical guidelines or they were not willing to share their opinion. This indicates that almost half of students have no motivation to update their knowledge on new/updated treatment guidelines that they need for clinical practice in the coming future. Student opinions showed that there are many factors prevent them from updating their knowledge on treatment guidelines. About three-fourth of the respondents believe that it is generally hard to keep up with new updates on clinical guidelines once the integrated therapeutics course are over. Even though the majority of students don't think that the treatment guidelines are just for the physicians, they don't take the initiative to update their knowledge. Instead they prefer the professors to update them on new treatment guidelines while they also agree it is the students' sole responsibility to update their knowledge on treatment guidelines.

The apathetic attitude towards updating students' knowledge is reflected in the knowledge section. The mean score was only 3.17 and it is barely above 50%.Students were most proficient in ACC/AHA treatment guideline for blood cholesterol, American Diabetes Association's guideline for diabetes treatment and least proficient in HIV/AIDS treatment guideline. This can be attributed to an increased exposure to blood cholesterol and diabetes related topics during rotations.

This study has few limitations. The research expected participation of all the senior doctor of pharmacy students at Howard University. However, only 35 students participated (54% response rate). This lack of participation can be attributed to the out of state rotations and off rotation blocks that prevented students from attending the colloquium session at which the survey was distributed. Moreover, only six knowledge questions were included in survey to prevent students from apathetically answering the questions. Therefore each of the four guidelines could not be tested equally and it could have had an effect on the proficiency results. There is an in consistency in the response to opinion questions by the study participants. That is, 63 % of the study

participants agree that it is the sole responsibility of the senior doctor of pharmacy students to update their knowledge on new treatment guidelines after integrated therapeutics courses are over. Nevertheless, still about 54 % study participants' want to rely on professors to teach them about new/updated treatments guidelines. This two conflicting responses could create some ambiguity in the study. In order to enhance the validity of this study, we recommend the importance of further research to address the study limitations. Moreover, there is no prior study done on this topic to compare and contrast the results of this study.

Conclusion

We believe this study could provide a clue on how fourth year pharmacy students view new/updated treatment guidelines. The study results indicate that students are not efficient in keeping up with new/updated treatment guidelines. This could negatively affect the students' quality of patient care services once they enter healthcare practice.

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