A SURVEY ON THE IMPORTANCE OF TOPICS FOR PHARMACOINFORMATICS COURSE FOR BACHELOR AND MASTER PHARMACY DEGREES

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Dissertation submitted in partial fulfillment of the requirements for the

Bachelor in Pharmacy (Hons)

2015

ACKNOWLEDGEMENT

I would like to express my gratitude towards Allah S.W.T, whom with his willing gives me the opportunity to complete this Final Year Project. I would also like to express my sincere appreciation to my project's supervisor, Mr. Mohammed Abdul Hameed and co-supervisor, Dr. Long Chiau Ming for the valuable guidance and advice. They inspired me greatly to work in this project. Their willingness to motivate me contributed tremendously to this project. I also would like to thank them for showing me some examples that related to the topic of my project.

Besides that, I would like to thank the authority of Universiti Teknologi MARA (UiTM), for providing me with a good environment and facilities to complete this project.

Finally, an honorable mention goes to my family and friends for their understanding and support on me in completing this project. Without the help of them, I would face many difficulties in completing this project.

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ABSTRACT

Objective

This study was aimed to identify and review literature that presented information about development and application of pharmacoinformatics in pharmaceutical and health sciences. Besides that, this study also assessed the level of importance of the suggested topics for pharmacoinformatics course for Bachelor and Master of pharmacy degrees.

Methods

For the review, the quality assessment tool for quantitative studies suggested by Cochrane Collaboration was adopted. Independent assessment was conducted to evaluate the quality of the included studies. A databases used for this study and review was PubMed and Science Direct. Both databases search was conducted using the English key words, "pharmacoinformatics", "pharmacy informatics", "medical informatics", "health informatics" and etc. For the survey study, a quantitative cross-sectional study using questionnaire was distributed online via email invitation as well using printed questionnaires. This cross-sectional survey was performed from December 2013 to May 2014 among pharmacy lecturers in both public and private universities and registered pharmacists in ministry of health in the central part of Malaysia. The data were analyzed descriptively using Statistical Package for the Social Sciences (SPSS), version 20.0. The relative importance of the topics of Pharmacoinformatics course were quantified by the relative index method.

Key findings

The search strategy resulted in the inclusion of sources, the majority of which expert opinion and examines the pharmacoinformatics relevance from a theoretical point of view (PubMed, n = 72). Based from the keyword of "informatics" and "pharmacy" on PubMed databases using advanced search, 59 articles was obtained with particular fields which is title and abstract. The articles are then being filtered by article type, publication dates and languages of articles. The article type which is clinical trial (n = 2) and in

CHAPTER 1

INTRODUCTION

1.1 Pharmacists views about the contents of Pharmacoinformatics Course taught in Malaysian Public universities

Pharmacoinformatics is "*the scientific field that utilizes a systems approach to medication-related data and information – including its acquisition, storage, analysis, and dissemination – in the delivery of optimal medication-related patient care and health outcomes*"(1). Advances in science and integration of technology in health science have transformed the traditional health care system into "Medical Informatics (MI)". MI evolved in early 1960s and by 70s, many developed countries had adopted the use of Electronic Medical Record (EMR), Computerized Prescriber Order Entry (CPOE) with decision support, the usage of bar code in medication administration and automated dispensing cabinet. With the advent of MI, there is a huge potential for role expansion of pharmacists in this area. In early 1970s pharmacist were not involved in direct patient care, however, soon after the introduction of clinical pharmacy and pharmaceutical care, pharmacist involvement in direct patient care was guaranteed. Thus, to ensure that pharmacist can play a vital role in this challenging system, pharmacy informatics or