



Original article

Chinese medicine students' views on electronic prescribing: A survey in Hong Kong

Warrington Wen Qiang Hsu^a, Esther Wai Yin Chan^a, Zhang Jin Zhang^b, Zhi Xiu Lin^c,
Zhao Xiang Bian^d, Ian Chi Kei Wong^{a,*}

^a Centre for Safe Medication Practice and Research, Department of Pharmacology and Pharmacy, The University of Hong Kong, Hong Kong Special Administrative Region

^b School of Chinese Medicine, The University of Hong Kong, Hong Kong Special Administrative Region

^c School of Chinese Medicine, The Chinese University of Hong Kong, Hong Kong Special Administrative Region

^d School of Chinese Medicine, Hong Kong Baptist University, Hong Kong Special Administrative Region

Received 27 March 2014; received in revised form 25 August 2014; accepted 10 September 2014

Abstract

Introduction: Electronic prescribing (e-prescribing) can potentially improve the quality of patient care in traditional Chinese medicine (TCM) by facilitating clinical tasks. Published survey studies investigating e-prescribing use were mostly conducted in conventional medicine, but these findings cannot be entirely generalised to TCM practice. It is important, therefore, to investigate e-prescribing in the TCM context.

Purpose: To investigate Chinese medicine students' attitudes and perceptions of e-prescribing use in Hong Kong.

Method: Questionnaires were distributed to TCM students in three Hong Kong universities between January and May 2013. There were 259 participants in this study. Questionnaires were distributed and collected during lectures. The data was analysed using descriptive statistics.

Results: The overall response rate was 89.3%. Only 21.2% of survey respondents had previously used an e-prescribing system. However, 86.5% of the respondents stated they want to use e-prescribing after they qualify as TCM practitioners. Patient care efficiency was rated as the most favourable outcome of e-prescription compared to handwritten prescriptions. The reliability of the e-prescribing system was rated as a major concern.

Conclusion: TCM students in Hong Kong were generally supportive of e-prescribing uptake. However, this study raised concerns and potential barriers to e-prescribing use. Factors that may facilitate e-prescribing uptake in TCM are also suggested. Further studies investigating TCM practitioners' views will be required to identify further facilitators and barriers to the uptake of e-prescribing.

© 2014 Elsevier GmbH. All rights reserved.

Keywords: Electronic prescribing; Chinese Medicine; Questionnaire; Survey

Introduction

Electronic prescribing (e-prescribing) enables clinical practitioners to manage and transfer prescriptions via computers. When e-prescribing systems were first developed, their main purpose was to ease the input and access of prescription data [1], and to issue prescriptions in conventional medicine. Many e-prescribing systems have incorporated functions that support

clinical management decisions. A well-designed e-prescribing system has the potential to facilitate clinical tasks and improve the quality of patient care. For example, e-prescribing data can be stored as part of a patient's electronic health record (EHR). Access to up-to-date patient health records can support health practitioners in clinical decision-making.

The use of Electronic Health Record Systems (EHRs) by office-based physicians in the United States (US) has increased from 2001 to 2012 [2–4]. In recent years, EHRs has evolved into powerful tools for pharmacovigilance and medication safety research [5–8]. Although many studies have demonstrated how e-prescribing can reduce the risk of medication error and adverse drug events in conventional medicine [9–12], concerns prevail surrounding patient data security and confidentiality [13]. Health

* Corresponding author at: Centre for Safe Medication Practice and Research, Department of Pharmacology and Pharmacy, 2/F Laboratory Block, 21 Sassoon Road, Li Ka Shing Faculty of Medicine, University of Hong Kong, Hong Kong Special Administrative Region. Tel.: +852 3917 9441.

E-mail address: wongick@hku.hk (I.C.K. Wong).

providers may not implement computerised systems on the assumption that changes in practice may result in reduced productivity [13,14]. Survey studies in conventional medicine have investigated health providers' attitudes and perceptions towards e-prescribing [15,16]. Information obtained from survey data is potentially useful for planning policies on the uptake of health information technology. To date, studies into the perceptions of traditional Chinese medicine (TCM) practitioners are limited, although in some areas, information technology is applied to current TCM study and practice [17–19]. Since the findings obtained from survey studies investigating e-prescribing in conventional medicine cannot be entirely generalised to TCM practice, a survey study in this context is required. Therefore, an investigation into Chinese medicine students' views of electronic prescribing was carried out in Hong Kong. The study also looked at identifying the facilitators and barriers to uptake of e-prescribing systems in TCM. Future research into the appropriateness of EHRs for TCM research by these future practitioners was also examined.

Method

Sampling of students

In Hong Kong, the Bachelor of Chinese Medicine (BChinMed) programme aims to train TCM practitioners to meet the standard of Chinese Medicine Council of Hong Kong (CMCHK). BChinMed programmes are offered at three public-funded universities, including the University of Hong Kong (HKU), the Chinese University of Hong Kong (CUHK) and Hong Kong Baptist University (HKBU). The annual intake for each university programme is approximately 30 students. Due to a major overhaul of the Hong Kong education system in 2012, a new six-year curriculum was launched [20]. This programme combines taught courses with clinical practice. On completion of the BChinMed, students are eligible to sit the Chinese Medicine Practitioners Licensing Examination (CMPLE) [21]. Candidates meeting CMPLE criteria are eligible to register as a TCM practitioner of the CMCHK. Master of Chinese Medicine (MCM) programmes enable degree holders to develop TCM clinical skills and be eligible to sit the CMPLE. TCM practice is regulated and is part of the publicly funded healthcare system in Hong Kong [22]. With formalised TCM education and licensing examination, TCM practitioner in Hong Kong is considered a healthcare professional parallel to Western medicine practitioner.

The study investigators (ZJZ, ZXL and ZXB) recruited Chinese Medicine students from HKU, CUHK and HKBU in 2013. Only students enrolled in a taught programme from January to May of that year were eligible. Those on clinical placement during this period were excluded. Surveys were distributed to students on a range of courses and at levels of advancement.

- HKU: undergraduate 1st/2nd/3rd/4th
- CUHK: undergraduate 1st/2nd/3rd and MCM 2nd year
- HKBU: 2nd/3rd/4th

The 5th year students at all three universities and 4th year students at CUHK were on clinical placement during the study period; hence they were not included in the study.

Questionnaire design and outcomes

A self-administered questionnaire was designed to investigate TCM students' views on e-prescribing and consisted of 12 questions that explored:

- Student demographics and previous experiences of e-prescribing
- Expectations of e-prescribing systems
- Comparison between e-prescribing and handwritten prescribing
- Positive features to uptake of e-prescribing
- Negative features to uptake of e-prescribing
- Views on provision of prescription data to third parties

The questions were set to elicit the proportion of TCM students who had used e-prescribing systems previously, the types of system, and the clinical settings where they were used.

The question on comparison between e-prescribing and handwritten prescribing was adapted from a study investigating e-prescribing in chain community pharmacies in the US [15]. The question's wording on outcomes (e.g. "Effectiveness" and "Efficiency") was deliberately set to be broad, and open to respondents' interpretation. These outcomes aimed to explore the effects of e-prescribing on daily TCM practice in terms of quality of patient care, and communications/relationships with patients/staff. This question was modified slightly from the original with the term "Clinical Staff" replacing "Physician" to reflect the TCM context.

Questions on the positive and negative features of e-prescribing consisted of four and seven items respectively. Students were asked whether the listed items were positive or negative features of e-prescribing. The last question on sharing prescription data explored conditions where prescription data might be provided to third parties.

A Likert-type scale was used for the question comparing e-prescribing to handwritten prescribing [23]. The options were 1 (much worse), 2 (somewhat worse), 3 (no change), 4 (somewhat better) and 5 (much better). The scale was also applied to questions on the positive and negative features of e-prescribing. The options were 1 (strongly disagree), 2 (disagree), 3 (neutral), 4 (agree) and 5 (strongly agree). A check box format was used, with the exception of two questions that used free text. Additional comments could be written in free text for some questions. The questionnaires were available in Chinese and English. All respondents completed the questionnaires in Chinese, which were subsequently translated to English for data analysis.

A pilot study was conducted by distributing draft questionnaires to six TCM students at HKU. After completion, discussion between an investigator (WH) and the students identified questions that were ambiguous or could be misinterpreted. The questionnaire was modified accordingly with the final

Download English Version:

<https://daneshyari.com/en/article/2479818>

Download Persian Version:

<https://daneshyari.com/article/2479818>

[Daneshyari.com](https://daneshyari.com)