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Exploring Medication Error Causality and Reporting: A Cross Sectional Survey of Hamad Medical Corporation Health Professionals

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Introduction

Medication errors are a major global issue, adversely impacting patient safety and health outcomes. Promoting patient safety through minimizing medication errors is therefore a key global healthcare objective. The most widely used and accepted definition of the term 'medication error' is that of the United States (US) National Coordinating Council for Medication Error Reporting and Prevention (NCCMERP), which defines 'medication error' as 'any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in control of the health care professional, patient or consumer'.¹ This definition has been adopted by Hamad Medical Corporation (HMC).

Medication error reporting within HMC is policy driven and has migrated from paper-based to computer-based system. The Performance and Monitoring Department within HMC data highlights the scale of medication errors, with 19,498 errors reported between January 2012 and September 2013. A wide variation in reporting rates was observed among different hospitals (NCCCR 897, Heart Hospital 1046, Hamad General Hospital 1516, Women's Hospital 3041, Al-Khor Hospital 3842, Rumailah Hospital 9156).

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Alsulami et al. recently reported the findings of the first systematic review of the literature on medication errors in Middle Eastern countries, highlighting that studies were relatively few in number and of poor quality, voicing the need for original, robust research.² QNRF has provided funding for a two year research study which aims to explore medication error causality and reporting in HMC from the perspectives of health professionals and other key stakeholders. The data presented in this abstract represents the first phase, the aim of which is to quantify the views and attitudes of health professionals.

Method

Design – a web based cross-sectional survey of all health professionals (doctors, nurses and pharmacists) working in HMC hospitals.

Questionnaire development, validation and piloting – questionnaire items were derived from Reason's Model of Accident Causation and Harm Error,³ the theoretical domains framework of behavioural change,⁴ and the 'Hospital Survey on Patient Survey'.⁵ The questionnaire was reviewed for face and content validity by a panel of experts in the United Kingdom and Qatar. This was followed by piloting in a sample of 100 HMC health professionals and test-retest reliability for all attitudinal items (all highly reliable, Kappa statistics, all $p < 0.05$).

Questionnaire distribution – all health professionals in HMC were invited to complete the web based questionnaire. The study commenced at the end of October 2015 and will be data collection will continue until the end of January 2016. Data collected to 12 November 2015 are presented in the abstract and full study data will be presented at the conference.

Ethics – the study was approved by HMC ethics committee and the ethics committees of Qatar University and Robert Gordon University (United Kingdom).

Results

To date, 767 responses have been received from 522 nurses (68.1%), 143 pharmacists (18.6%) and 102 doctors (13.3%). More than two thirds (69.4%) of respondents had been registered as health professionals for 10 years or less and most (83.8%) had direct patient contact. In terms of their involvement with medicines related processes, 14.1% were involved in prescribing, 30.1% in medicines preparation and dispensing, 55.4% in administering medicines and 45.0% in monitoring the effectiveness and toxicity of medicines.

Responses to key statements from the 'Hospital Survey on Patient Survey' are given in Table 1 and responses to key statements on medication error reporting in Table 2. While there were positive responses in terms of the efforts to promote patient safety and knowing how to submit a medication error report, there were less positive responses around staff pressures, patient and information transfers and the perceived consequences of submitting a medication error report. Notably there were concerns around the lack of feedback following submitting a medication error report, fears of reprimands and potential impact on career progression.

Conclusion

These preliminary data indicate that there are issues which may compromise patient safety and the effectiveness and efficiency of the medication error reporting system within HMC. While these data are specific to HMC it is likely that they are generalizable to other settings in the Middle East and beyond. Full study data will be analysed in due course and will inform the next stages of the research programme. These stages comprise focus groups of samples of questionnaire respondents to discuss further the issues raised, followed by one to one interviews with key policy makers, health professional leaders, and educators. Full study data will facilitate the development of interventions to reduce medication errors, increase the effectiveness and efficiency of the medication error reporting processes and ultimately enhanced patient safety.

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