Gaming in infection control: A qualitative study exploring the perceptions and experiences of health professionals in Mongolia

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Background: This study aimed to gain insight into the extent to which gaming is responsible for the underreporting of hospital-acquired infections (HAIs) in Mongolian hospitals, to identify gaming strategies used by health professionals, and to determine how gaming might be prevented.

Methods: Eighty-seven health professionals, including policy- and hospital-level managers, doctors, nurses, and infection control practitioners, were recruited for 55 interviews and 4 group discussions in Mongolia in 2008.

Results: All study participants were aware of gaming, which could occur via the following mechanisms: (1) doctors or nurses concealing HAI by overprescribing antibiotics or discharging patients early; (2) infection control practitioners failing to report HAI cases to hospital directors; and (3) hospital directors preventing reporting of HAI cases to the Ministry of Health. Gaming was consistently perceived to be a response to punitive performance evaluation by the Ministry of Health and penalization of hospitals and staff by the State Inspection Agency when HAIs were detected. Participants held divergent views regarding the best approach to reduce gaming, including excluding the current single indicator (ie, HAI rate) from the performance indicator list, developing multiple specific infection control indicators, improving the awareness of health managers regarding the causes of HAI, and increasing funding for infection control activities.

Conclusion: Inclusion of the overall HAI rate in the targeted performance indicator set and the strict control and penalization of hospitals with reported HAI cases are factors that have contributed to gaming, which has resulted in deliberate, extreme underreporting of HAIs in Mongolian hospitals.

Key Words: Hospital-acquired infection; underreporting; performance evaluation.

In the medical literature, gaming refers to the submission of fraudulent reimbursement claims and the manipulation of clinical and nonclinical performance data.[1-4] Gaming of performance data mainly involves fraudulent administrative arrangements purposely made by clinical administrators to meet special performance targets and to avoid penalties.[4,5] A 2003 survey found that 85% of hospital trusts in the United Kingdom achieved the national targets on accident and emergency department waiting times through various gaming strategies.[5] Since the late 1980s, performance indicators have been introduced in many countries as a tool for improving the quality of health care.[6-8] The impact of such initiatives on the veracity of hospital infection control data has been little investigated, however. To date there has been only one published report on gaming in infection control, which warned of undesired consequences, including false coding of cases of hospital-acquired infection (HAI) in response to cutting reimbursements to US hospitals for the cost of treating certain HAIs.[9]

In Mongolia, hospital performance indicators were introduced in the early 2000s, and the overall hospital HAI rate is included in the national indicator set.[10,11] Hospitals with high HAI rates are ranked lower in terms of quality of services provided, making administrators at these hospitals vulnerable to redundancy. When comparing the official HAI statistics to international reports, Mongolian Ministry of Health (MoH) officials strongly suspected that the reported HAI rates were

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underestimates and that the quality of HAI performance data was low. As a result, in December 2007 the HAI rate was removed from the national indicator set. Since then, infection control performance evaluation has moved from one extreme—strict, punitive enforcement—to the other—no enforcement and no means for monitoring infection control.[12]

Since its establishment in 1998, the Mongolian Hospital-Related Infection Surveillance and Research Unit (HRISRU) has annually reported an HAI prevalence of 0.01%-0.05% of all admissions to tertiary (national) and secondary (province and district) level hospitals, with the highest prevalence (0.05%) in tertiary hospitals in Ulaanbaatar.[13-15] The previous study conducted in September 2008 found a point prevalence of HAI of 5.4% in two tertiary hospitals in Ulaanbaatar and suggested that national reports grossly underestimate the HAI rates.[16]

The aims of the present study were (1) to gain insight into the reasons and mechanisms for the underreporting of HAI rates in Mongolian hospitals; (2) to identify gaming strategies used by health professionals in response to the imposition of performance indicators and associated penalties; and (3) to examine ways in which gaming might be prevented so that meaningful data on the HAI burden in Mongolia can be obtained.

METHODS

Study design

A qualitative study incorporating 55 in-depth interviews and 4 focus groups, along with an additional document analysis, was conducted in the capital city Ulaanbaatar and the two provincial capitals of Mongolia between September and November 2008. Ethics approval was obtained from the Mongolian MoH and the University of Queensland, Australia. A purposive sampling method with a supplemental snowballing technique was used to recruit all available key informants.[17]

Data collection

Interview participants were recruited from the MoH (n = 5), Ulaanbaatar city (n = 3), and province (n = 5) Health Departments, tertiary (n = 24) and secondary (province and district; n = 10) hospitals, the State Inspection Agency (SIA; n = 3), the Health Insurance Department (n = 1), the Health Sciences University (n = 2), and the nursing college (n = 2). Two focus group sessions were conducted in Ulaanbaatar, including infection control practitioners (ICPs) from the HRISRU (n = 6) and tertiary (n = 6) and district-level (n = 3) hospitals. The other two focus group sessions were conducted in general hospitals in Selenge and Dornogovi provinces and included doctors (n = 11) and nurses (n = 6). The principal investigator conducted the group discussions and interviews using the same semistructured guide. The issue of gaming was one of 4 main topics of the discussions. The discussions were recorded digitally in MP3 format. Thematic saturation was reached after discussions with 87 health professionals.

Document analysis

During the study period (September-November 2008), copies of indicator lists from the 2008 performance contracts of selected tertiary (n = 2), district (n = 3), and province (n = 2) hospitals were collected to check whether the HAI indicator was in the hospital contracts and to corroborate the qualitative results.[18]

Data analysis

The principal investigator translated qualitative data from Mongolian into English at the time of transcription. The 5-step framework approach was used for the thematic analysis using NVivo-8 software (QSR International Pty Ltd, Melbourne, Australia).[19] Three investigators identified major themes, after which the principal investigator read and reread transcripts by indexing the presence of each theme and selecting quotations. Any difficulties in the interpretation of transcripts were discussed between the investigators. Triangulation methods (ie, cross-referencing among participant groups, document analysis, and literature) were also used to enhance the reliability of findings.

The study participants were categorized into 4 groups: (1) doctors and nurses (core health professionals); (2) ICPs and infection control team members (allied staff, including ICPs, laboratory physicians, and sterilization and cleaning staff), (3) health department and hospital managers (including directors and administrative staff of the capital city and provincial health departments and tertiary and district hospitals), and (4) MoH officials (including MoH staff).

RESULTS

Some important similarities and differences in the responses were seen among the 4 study groups (Table 1).

Doctors and nurses

Gaming was not well recognized among doctors and nurses. Those who did recognize the issue claimed to know of gaming only through rumors and perceived that gaming occurred at the hospital's top level.