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*Editorial*

## Foreign Doctors and Patient Safety

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In a letter to the editor in the current issue, Sajeet Sohi, a Canadian who has studied abroad (CSA), points out that CSAs have great difficulties in acquiring residency positions in Canada at a time when there appears to be a doctor shortage. International medical graduates (IMGs) make up about 25% of physicians in Canada; CSAs are left to compete with these IMGs who are not Canadian. Sohi correctly argues that the CSAs are a largely wasted resource in the Canadian medical system.

Currently there are approximately 3,500 CSAs from 80 schools in almost 30 countries, producing approximately 700 graduates per year, or nearly 30% of the total Canadian medical school output<sup>1</sup>. Less than 20% of these Canadians acquire residency positions compared to nearly 98% of graduates from Canadian medical schools. The medical education that CSAs receive is very heterogeneous. This has led to concerns that CSAs, like other IMGs, may have inferior knowledge and skills compared to graduates of Canadian medical schools and therefore compromise patient safety.

In 1999 the Institute of Medicine of the National Academy of Sciences in the United States released the report, *To Err Is Human: Building a Safer Health System*.<sup>2</sup> The report made the staggering claim that nearly 100,000 people in hospitals die annually in the United States as the result of medical mistakes. Subsequent commentators have suggested that this is an

underestimate and the actual mortality rate is much higher. These claims triggered international discussion, concerns and controversies about patient injuries in health care. These errors are due to drug overdoses or interactions, misdiagnoses, botched surgeries, incorrect medications, and simple carelessness. Patient safety, a topic that had been little understood and even less discussed in health care systems, has become a public concern in most Western countries.

Despite the concern for patient safety, thousands of people are injured or die from medical errors and adverse events (incapacitation, serious injury or death) each year. Worldwide this figure may run into the millions. Leaders in the health care systems have emphasized the need to reduce medical errors as a high priority. Doctors, as main participants have been called upon to address the underlying systemic causes of medical error and harm. Unfortunately, several studies have shown that even by 2007, more than half of hospital doctors surveyed<sup>3</sup> had not even heard of the report, *To Err Is Human*.

It is not surprising then that few advances have been made in reducing medical errors and increasing patient safety in the past decade. A recent study of 464 major adult cardiac surgical cases at three hospitals resulted in 1,627 reports of problems and errors for an average of 3.5 and a maximum of 26 per procedure. Nearly three-

fourths of the cases (73.3%) had at least one recorded event. One-third (33.3%) of events occurred prior to the first incision, and 31.2% of events occurred while on bypass. About two-thirds (68.0%) of events were considered minor in severity (e.g., delays and missing equipment), but a frightening percentage (32.0%) was considered major and included anastomotic problems (e.g., suturing vessels), pump failure, and drug errors. Many (30.9%) of the problems were never even discussed among the surgical team. A wide range of problems and errors occurs during the majority of cardiac surgery procedures.<sup>4</sup> Cynics argue that the number of medical mistakes is much higher than is commonly accepted because most of the errors are buried with the patient.

The major factors underlying medical errors are thought to be system-based factors (miscommunication on the ward) as well as person factors: physician carelessness, ignorance, lack of professionalism, physician exhaustion and sleeplessness, physician arrogance, laziness, and poor self assessment, particularly of personal limitations in medical skills.<sup>5,6</sup> There is concern that the preferred tendency to put the emphasis on systems, but not holding individuals responsible for errors will weaken accountability for physician performance. Failure to hold individuals accountable may contribute significantly to risk of adverse events and may lead to a focus of patient safety away from the autonomous responsibility of physicians to a systems-based approach.

This focus on medical errors and patient safety has an impact on IMGs. A common concern is that IMGs are inadequately educated and have poor communication skills and that this compromises patient safety. Residency program directors, for example, typically identify communicating with patients, communicating with team members, and basic clinical skills as the greatest challenges for IMGs. IMGs themselves typically identify other factors such as an unfamiliar medical system, colloquialisms and cultural factors as major challenges. Do IMGs increase the risk on patient safety due to medical errors? Several studies have been conducted on this topic.

A recent large scale study by Norcini et al<sup>7</sup> focused on patient outcomes of 244,153 hospitalizations in Pennsylvania. They found that patients of IMGs (who had become licensed in the US) had significantly lower mortality rates than patients cared for by either American-educated doctors or Americans who had

studied abroad (USIMGs – United States International Medical Graduates). The patient population consisted of those with congestive heart failure or acute myocardial infarction. The biggest differences in mortality rates were between IMGs and USIMGs, in consonance with previous findings, especially the work done in Canada comparing CMGs and IMGs<sup>8</sup>. USIMGs tended to have lower<sup>9,10</sup> scores on the cognitive portions of licensing exam sequences, lower ratings by training program directors, and lower rates of specialty board certification. Similarly, Boulet et al<sup>10</sup> found that U.S. citizens trained abroad do not perform as well as other IMGs or U.S. graduates on certifying exams. Moreover, they are more likely than non-U.S. citizens to be engaged in primary care activities.

In a direct comparison study, Andrew<sup>11</sup> compared 24 IMGs with 21 Canadian medical graduates in a family practice residency program in 2006 and 2008 at St Paul's Hospital in Vancouver, a training site of the University of British Columbia. Canadian graduates and IMGs had similar results on evaluation reports: CMGs had 310 (99%) reports that were designated as either 'exceeds expectations' or 'meets expectations', and only 3 (1%) were in the 'needs improvement' category. The IMG results were 362 (97.6%) in 'exceeds' or 'meets expectations' categories; 9 (2%) were in the 'needs improvement' category. The IMG residents compared favorably with their CMG colleagues on their in training evaluation reports. Subsequently, however, the CMGs did perform better on the Certification in Family Medicine examination than did the IMGs. The results of the in training evaluation reports indicate that IMGs are seen by their teachers as competent physicians.

While CSA test and clinical performance data has not been systematically studied, the preponderance of the evidence indicates that although IMGs (including CSAs) may perform less well on written exams, they generally perform equally to their indigenous colleagues, and in some outcomes perform better, in clinical practice. There are no bases, therefore, to worry that competent IMGs increase the risk to patient safety, although further research is welcome.

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