IJHG review

Health professional education, governance frameworks and the elephant in the room

Initially it was difficult to find a common thread for the articles in this issue of *IJHG*. However, on reflection the theme that emerged was improving care and the importance of developing a clear strategy, agreed by different agents or agencies, to bring about those improvements.

This issue highlights a wide range of topics from bringing dental care to marginalised communities in rural Australia, right up to creating awareness of the multiple health and illness implications of climate change and developing strategies to cope with these.

Health professional education's contribution to health governance

Three articles focus on different aspects of health professional education. In Uganda, Edwards (2018) explores the relationship between midwifery education and the high levels of maternal and neonatal death in the country. Nurakynova (2018) addresses strategic planning in Kazakhstan to bring medical education in line with international standards, while Skapetis *et al.* (2018) explore the effectiveness of engaging foreign graduates of Australian dental education programmes in an initiative to bring dental care to deprived rural communities.

Less than 50 per cent of women in Uganda receive the recommended four antenatal visits and 42 per cent give birth without the assistance of a skilled birth attendant.

Edwards (2018) suggests that there are three types of delay, which prevent women receiving appropriate care. These are delay in deciding to access care, delay in reaching a care facility and delay in the provision of care once a facility has been reached. Lack of access may be due to lack of understanding of risk, lack of urgency, location, income or resources or due to the traditional decision-making role of a male family member. This model helps to explain why some women do not access care but may be interpreted as focusing blame for lack of care on the woman and her family, when there are systemic and social factors that inhibit a woman's ability to access care.

While these statistics have a multi-factorial aetiology, improving midwifery education could help to reduce maternal death by ensuring that midwives understand the contributing factors. Very often causes of death are recorded as the obvious end-point such as haemorrhage or eclampsia. However, these could be ameliorated by improved access to antenatal care and an understanding of the chain of events leading to maternal or foetal/infant death.

While Uganda has similar social and economic problems to many developing countries, it has the advantage of being a relatively stable and peaceful country. The Ugandan Government has an ambitious programme of reform which aims to transform Uganda from a mainly peasant society to a modern prosperous economy by 2040. An element of this must ensure access to healthcare for all of Uganda's citizens and a commitment to work towards achievement of the WHO sustainable develop goal 3.1, the reduction of maternal mortality to 70/100,000 globally. Relating back to midwifery education, this requires training midwives to International Congress of Midwives standards with mandatory post-registration professional development and regulation. A strong and effective midwifery profession can be an important factor in sexual and reproductive health education and in providing safe and cost-effective care to women. As Uganda has a young population and a high rate of teenage pregnancy, reproductive health is a key public health area.

Kazakhstan is another developing country, which recognises the key role of health professional education in improving the nation's health. In this instance it is medical education that is undergoing transformation in order to meet the requirements of a rapidly changing world.

Strategic planning is an important construct to ensure that health education today will meet the needs of medical and other health professionals tomorrow.

Kazakhstan signalled a commitment to modernising medical education when they joined the Bologna Process in 2010. This process is based on a declaration signed in Bologna in 1999 to make higher education courses more comparable, congruent and transferable across Europe. The concept is based around a three-tier degree system of bachelor's, master's and doctorate degrees aimed to create a higher education system which would be transferable between institutions in different countries.

The Bologna Process is contributing to strategic planning in the university system in Kazakhstan, particularly in the five accredited state, and two accredited private medical universities. A total of 16 regional simulation centres have been developed for teaching and assessing clinical skills. Kazakhstan is beginning to attract medical students from a wide range of countries and therefore needs to ensure that medical schools in the country meet international standards. The leading medical university is Kazakh National Medical University (known as Kaz NMU), which has links with the prestigious Duke University School of Medicine in Durham, North Carolina.

New South Wales has recently created an international dental graduate (IDG) workforce programme to provide dental services to deprived rural areas.

This brings state-funded dental care to low-income communities where clients often have multiple complex medical and social problems.

Most dental graduates choose lucrative private practice with the result that only 10–15 per cent of the Australian dental workforce remains in public-sector care. Enabling foreign graduates to work under a limited registration in Australia enables them to consolidate their learning and extend their knowledge and skills while at the same time providing a valuable public service. Each year ten international students are selected and given intensive training to prepare them for rural placements across the state.

Evaluation of the service is based on the premise that patient satisfaction is a reliable indicator of the success of the programme. A descriptive research project employed a survey tool to measure patient satisfaction with the rural dental service. Patients were randomized to complete the survey (or not) and over 800 surveys were collected and analysed. Approximately 90 per cent of the surveys were used to ask about patient satisfaction with care they received from the IDGs, while the remaining surveys evaluated care provided by the dentist mentors.

Results indicated high satisfaction levels with both the clinical care and interpersonal skills of the IDG. Clients rated skills of the IDG as equivalent to those of the dentist mentors who all had more than five years' post-qualification experience. The nationalities represented in the IDG group included India, Iran, Burma, The Philippines, Sweden, China and Iraq. Female clients praised the IDG for the fact that they took time to explain and discuss treatment options with them.

This project highlights the fact that IDG dentists under limited registration can provide an equivalent service to experienced dentists in under-served rural communities. This could serve as a model for increasing dental care in under-resourced areas across the country.

Governance frameworks
Other articles in this issue address inequity in access to health care (Assari *et al.*, 2018), the debate about models of regulation in paramedic services (O'Meara *et al.*, 2018), how incision-site

surveillance is improving recovery rates in a Scottish hospital (Canty and St George, 2018) and the impact of climate change on human health (Shea *et al.*, 2018).

Ensuring access to care and health professional education are not the only problems hindering health care improvement, particularly in under-resourced areas. A common challenge is the use of informal payments to enable patients to gain access to care, or to purchase improved levels of care. In Uganda this may make the difference between a woman being given a postnatal bed or having to rest on the floor following childbirth (The World Bank, 2012). This is by no means an issue limited to African or Asian countries. Two European countries in which this practice is known to exist are Hungary and Greece, with over 60 per cent of doctors' real income in Hungary estimated to come from informal payments. In Greece, over 74 per cent of maternity service users reported making informal payments in order to improve the level of care they received. Informal payments can be either voluntary or compulsory and are difficult to eradicate due to cultural norms and inadequate levels of basic services. However, they inhibit access to care for people who cannot afford to make informal payments.

A government initiative, the "health sector evolution plan" was introduced in Iran in 2014 to address the issue of informal payments for medical care (Assari *et al.*, 2018). To determine how successful this has been, over 2,000 questionnaires were distributed with over 1,000 completed across Iran. The results indicated that 26 per cent of all inpatient care was subject to requests for informal payments while approximately 12 per cent of outpatient encounters were also subject to compulsory informal payments. It would seem that voluntary payments are not seen as such a problem because of their congruence with the Iranian culture of gratitude and custom of gift-giving. However, the line between a gift and a payment becomes blurred when an understanding exists that the service will not be provided to the expected level unless a gift is forthcoming. Ongoing work is being done to address the problem.

In Scotland, all publicly funded medical and surgical care is free at the point of delivery and provision of significant gifts to health professionals is prohibited under the terms of their professional bodies' regulatory frameworks (GMC, 2013). However, in healthcare there is always margin for improvement in many aspects of care.

In 2014, one Glasgow neuro-surgical unit became concerned about anecdotal evidence that surgical site infections (SSI) were increasing and wanted to determine whether this was accurate and if so, how the problem could be addressed. SSI make up one-fifth of all healthcare-associated infections in Scotland, increasing morbidity and mortality rates, resulting in more suffering for patients and their families. The extra care required represents a significant financial and resource burden for the National Health Service.

To address this issue, an SSI reporting form was developed by one senior surgeon assisted by a group of junior doctors. Clinicians were asked to complete a form any time an SSI was suspected and post it in one of several boxes on the unit. As the forms were printed on green paper this became known as "doing a green form" which helped to embed a reporting culture on the neurological unit.

To make reporting easier, an Excel spreadsheet was developed which could be accessed by anyone with the correct password onto the computer system. This eliminated paper forms and seemed to make reporting suspected SSI simpler for clinicians.

While senior clinician involvement increased, there was not much interest on the part of management to develop and implement a more formal reporting and audit system. This changed when an infection risk caused by waste fluid contamination was identified leading to the closure of the unit while the problem was rectified.

An SSI surveillance nurse was hired and a monitoring programme was developed. This enabled comparison between surgeons' rates of infection as well as consideration of other variables such as whether the operative procedure was elective or emergency, which

operating theatre was used and what the procedure was. Postoperative surveillance was continued for 30 days.

Monthly reports were generated and sent to a committee that examined all the variables, which could contribute to an SSI.

Monitoring SSI would seem an obvious clinical necessity; however, it takes more than just clinician involvement to set up a robust monitoring programme to evaluate data and use it to make changes in organisational and clinical factors.

Change to improve clinical care is also the topic of O'Meara *et al.* (2018) article, which presents the debate on two distinct models of paramedic care. In the UK and other English-speaking countries such as New Zealand, Australia and Ireland, paramedics are viewed as autonomous health professionals and are regulated by their own professional organisations. In North America, however, paramedic practice is conducted under medical direction with the physician ultimately responsible for the decisions made and care given by the paramedic teams.

To create an informed debate about the relative efficacy of each of these models, the authors decided to conduct exploratory research with North American paramedics. They selected relatively isolated areas in both Canada and the USA where it was unlikely that paramedic teams had volunteers who had worked in countries using a self-regulation model of paramedicine.

Interestingly, many paramedics seemed to support the medical direction model stating that doctors had more education or better decision-making abilities. Medical direction seemed to be personality driven; the quality of the service was very dependent on who the medical director was. This was particularly noticeable in the USA where there is no national standard for paramedic education or registration. Furthermore, it appeared that quality control was not a topic that had been considered important in most paramedics' education as many respondents indicated that they knew little about quality assurance frameworks. There were, however, some who had more vision of what paramedicine could become if paramedics were responsible for their own training, registration and monitoring. This was more noticeable within the Canadian part of the sample where the paramedic service is well regulated with strong paramedic leadership.

From this study, a hypothesis can be drawn that Canada is ready to begin the process of paramedic self-governance. The fragmentation and doctor-centred ethos in the USA is symptomatic of larger problems in the organisation of medical care. When these change, the paramedic profession will develop as a more autonomous self-regulated partner in healthcare.

The largest elephant

I have left what may be the most important article in this issue until the end of the review. Shea *et al.* (2018) have taken the brave position of acknowledging the most urgent global healthcare problem. Like the proverbial elephant in the room, climate change is the largest, yet most neglected healthcare challenge in the world today. While governments, NGOs and other healthcare providers make plans to improve the health of populations, climate change is already causing, and will continue to cause unprecedented healthcare problems for billions of people and most urgently, for those in marginalised societies.

The effects of climate change on human health may prove to be catastrophic: flood, drought, human migration, crop failure, disruption to ecosystems, new and resistant forms of disease, water shortage and war. The only way to mitigate these effects is to develop cohesive international plans immediately.

The UN Climate Change Conferences have highlighted some of these issues and this is reflected in the 2030 Sustainable Development Goals. Health professional education must adopt a new global focus with the emphasis on cross-agency collaboration to respond to the

impact of climate change on human health. A current problem is that health professionals may fail to recognise the relationship between poor health and climate change as this topic has, until now, rarely been a significant part of health professional education. This needs to change in order to support the development of healthcare leaders who understand the science of climate change and its relationship to human health.

There are however some encouraging initiatives.

The Lancet Countdown developed 40 global climate health indicators and is currently engaged in a tracking exercise to determine the extent and effectiveness of national public health policies. The C40 (2017) network, launched by the mayors of London and Bengaluru, has engaged more than 90 cities around the world in a commitment to address air pollution in urban areas.

A major setback is that the future of climate change action in the USA has been endangered by the current administration's "America First Energy Plan" that reverses some of the most important initiatives of the Obama era such as the Climate Action Plan (Hwang and Kennedy, 2017). In a policy that focuses on the extraction of fossil fuels at any cost and reduces government spending on environmental protection, the current government's assertion that protecting air and water remains a "high priority" has a hollow ring to it.

Other areas of the world seem to be taking the health implications of climate change more seriously. Just under half of the targets published in China's 13th Five-Year Plan relate to environmental issues, and the understanding of health impacts resulting from climate change are clearly acknowledged.

Similarly, about half of all EU states are addressing the health impact of climate change in their national strategies, with Germany and France leading in their focus on the health consequences of climate change including extreme weather events and the predicted rise in both infectious and non-infectious diseases.

In recognition of the need to address climate change within health education, the Mailman School of Public Health at Columbia University now offers an academic programme in climate and health. A Global Consortium on Climate and Health Education has also been launched with the goal of educating all health professionals to understand and respond to illnesses and other serious health issues associated with climate change.

All health professional education programmes need to engage urgently with this topic and governments must desist from their denial of climate change in order to create a culture of strong evidence-based leadership in this area. Only by collaborative concerted efforts can the elephant be moved out of the room and returned to his natural habitat.

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