Costs of ignorance studies in medical education

Sir,

Medical education is expensive (Walsh, 2010). Its cost has led a number of researchers to investigate ways to improve quality for a given spend or to save on spending (Walsh, 2013). This in turn has caused concern among some quarters that attempts to find value in medical education risk causing commissioners of medical education to cut budgets that are already tight or to squeeze quality indicators too much. Another perspective is to look at the cost of not providing medical education. When I first heard this argument, I thought it was perhaps glib and self-serving and unlikely to have any sound academic foundations, but examination of cost analyses in the context of health care reveals a possible parallel in cost of illness studies.

Cost of illness studies try to estimate the cost burden that a society must bear as a result of certain illnesses (Byford et al, 2000). They act as a baseline upon which health-care economic analyses can be built: if a certain illness places an enormous cost upon a country then even expensive interventions that will reduce such costs are likely to be worthwhile. For example stroke places a large economic as well as health burden on society. A new drug that enables a rapid and full recovery from stroke for most patients would likely justify a high price tag – because of the resultant cost savings to society. There are a number of possible equivalents to cost of illness studies in medical education. One possibility is studies that look at the consequences of an inadequately educated health-care workforce; another is studies that look at the consequences of having no workforce at all.

The main costs associated with an inadequately educated workforce are caused by errors in the provision of care. Putting aside the human costs of such errors, the monetary costs are enormous. Van Den Bos et al (2011) have termed this the $17.1 billion problem – the annual cost of measurable medical errors in the USA. The authors examined medical claims data to measure the frequency and costs of medical errors. Pressure ulcers and postoperative infections were the most common forms of error – both of which are preventable.

Van Den Bos et al are not alone in recognizing the size of the problem. Reviews in the UK have shown that one in ten hospital patients will become the victim of a medical error, approximately half of which are preventable (Department of Health, 2000). In the UK, the National Reporting and Learning Service receives around 60 000 incident reports each month (Carruthers and Philip, 2006). Some of these reports might not actually result in medical error – some may be related to near misses. However, there is no question but that the prevalence of error in the UK and other health-care systems is high. Another report has shown that errors may result in as many as 90 000 preventable deaths and one million injuries in the American health-care system every year (Weingart et al, 2000).

Medication-related errors are likely to account for a substantial amount of total errors. In the USA, medication-related errors are thought to account for $887 million in extra costs (National Research Council, 2007). Health-care professionals who have received inadequate training or who are inexperienced are more likely to make medical errors (Wu et al, 1991). There is now a great deal of evidence that many errors are preventable and that medical education can play an important role in their prevention (Crea, 2011; Gordon and Bose-Haider, 2012). Despite this, at least one study has shown that many doctors are not aware of the most common errors that occur in clinical practice (Hernandez et al, 2010).

Workforce planning has traditionally been a Cinderella specialty in health care. It incorporates the disciplines of medical education, public health and labour economics, but it is not quite fully owned by any of these. However, there is a growing realization that there can be no health with a health-care workforce (Buchan and Campbell, 2013).

Health-care workforce planning faces a number of challenges. There are inadequate numbers of doctors and other health-care professionals in many countries. However, more often than not, the problems with health workforce planning are more complex and deep-set than that. Sometimes it is the wrong type of health-care professionals (e.g. too many tertiary care specialists and not enough frontline primary care professionals), sometimes the health-care professionals are in the wrong location within the country (e.g. inadequate numbers of health-care workers in rural and remote locations). It is also not just a matter of concentrating on undergraduate or postgraduate training but giving adequate thought to retention of the workforce in the places where the professionals are needed.

An absent workforce would have even more catastrophic consequences than a poorly trained workforce. Both problems would leave a population bereft of the health care it needs. This is the true cost of ignorance and there are compelling reasons to pay more attention to these problems and view monetary investments in health-care professional education in their true context.

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