

## Labour economics and healthcare professional education

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### Abstract

Healthcare professional education is the undergraduate, postgraduate and continuing professional development for doctors, nurses and allied healthcare professionals. Labour economics is the relationship between workers and employers, and the resultant effect on employment and wages.

Healthcare professional education ultimately produces a workforce, and that workforce is governed by the rules of labour economics like any other workforce. Despite all of these largely incontrovertible facts, there has been remarkably little interest in the relationship between healthcare professional education and labour economics. This short article attempts to redress this shortcoming by describing some of the factors that can affect healthcare professional education and labour economics, and aims to mention some of the methods in which these two disciplines can interact with each other.

**Keywords:** Labour Economics, Healthcare Professional Education, Cost.

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Healthcare professional education is expensive (1); however, it is of high value. The outcomes of healthcare professional education are also expensive as fully qualified healthcare professionals command high wages. Nevertheless, the outcomes of healthcare professionals are of high value as well because they are the foundations of our health service and healthy society (2). Healthcare professional education ultimately produces a workforce, and that workforce, like any other workforce, is governed by the rules of labour economics. Despite all of these largely incontrovertible facts, there has been remarkably little interest in the relationship between healthcare professional education and labour economics. This is surprising in view of the followings: the cost of healthcare professional education (e.g., the UK spends £5 billion on healthcare professional education); the cost of reimbursing the healthcare workforce, which is always a significant proportion of the total healthcare cost; the importance of high quality healthcare professional educa-

tion; and the importance of having a high quality workforce (3). This short article attempted to redress this shortcoming by describing some of the factors that can affect healthcare professional education and labour economics, and aimed to mention some of the methods in which these two disciplines can interact with each other. In this article, healthcare professional education refers to undergraduate, postgraduate and continuing professional development for doctors, nurses and allied healthcare professionals; and labour economics refers to the relationship between workers and employers and the resultant effect on employment and wages (4).

Healthcare professional education and labour economics are in essence a matter of supply and demand. However, sometimes, we are faced with both oversupply and undersupply. The oversupply of healthcare professionals in certain specialties is a waste. The expense of education that has been provided has gone to waste and now the healthcare professional is a burden on

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the taxpayers, so it is a double hit for the healthcare service. However, there may be a case for having a small oversupply. The future of the health service is unpredictable, so it may be wiser to have a small oversupply than an undersupply, which will mean that patients cannot receive the care they need. A small oversupply will also mean that there is some competition for training places and specialist posts; this should motivate the learners to achieve more and leads to quality improvement. However, with respect to undersupply, there are few arguments for having an undersupply of healthcare professionals. There will be savings in the education budgets, but these savings will be far outweighed by the costs of untreated acute and chronic diseases.

However, elasticity of supply is a complicating factor. In labour markets, supply of workers can be of high elasticity or low elasticity. The supply of cleaners, for example, is highly elastic; there is a large base of potential employees, and cleaners can be trained quickly, and they can also work as they are being trained. In contrast, the supply of tertiary care specialists is highly inelastic. Training tertiary care specialists is slow and expensive; there is a limited base from which to recruit into these professions; and they cannot start work while they are still students. Training in some health professions is shorter than in others; however, all trainings are relatively long and expensive, and the solution may lie in shorter and lower cost training, which will naturally increase elasticity. However, lower cost and cheaper training programmes that maintain high quality are not easy to achieve (5,6).

The issue of wages for healthcare professionals is also an important influencing factor in both labour economics and education. In the worst case scenario from the financial perspective of the state, undergraduate education is expensive and paid for exclusively by the state; postgraduate trainees are paid high wages as they learn; and the end product is highly qualified healthcare professionals who command high wages. In

the best case scenario from the financial perspective of the state, undergraduate education is low cost or paid for by the student; postgraduate trainees are paid low wages as they learn; and the end product is highly qualified healthcare professionals who command modest wages. However, this financial best case scenario brings with it disadvantages in both the short and long term. If students pay for their own education, then only those from wealthy backgrounds will ever be able to become healthcare professionals. It will also be difficult to recruit into health professions that command modest wages. A potential solution is undergraduate student loans but here loans will generate student debt, and graduates will gravitate towards higher earning specialties to repay that debt (7). These higher paying specialties will not necessarily be those that the population needs.

However, retention of the healthcare workforce within the labour market is a more straightforward issue, and it relates to return on investment from healthcare professional education. If a fully qualified healthcare professional leaves the profession or the country or leaves the public health service that sponsored their education, then this is simply a matter of a poor or no return on investment. Unfortunately, it happens all too often and particularly in developing countries that can least afford to lose healthcare professionals (8,9). Such healthcare professionals frequently emigrate to richer countries after graduation for better wages, better terms and conditions and better career opportunities. The healthcare workforce is now global, and thus global factors will influence both healthcare professional education and labour economics. Efforts to overcome this important problem can be largely categorised into those of the carrot and the stick. The carrot might include more incentives to stay in the country such as better wages or better career opportunities. The stick might include disincentives to leave such as schemes to defer the point of full registration as a doctor until after the doctor has

completed a number of years work in an area of special need within the country of graduation.

The scope of this discussion is international. Some of the countries which are closest to the worst case scenarios from the financial perspective include many of those from Sub-Saharan Africa. The problem with their systems is simply that there is poor retention of healthcare workers and thus much of the investment in education is wasted as workers leave the country shortly after graduation. A number of European countries are closer to the best case scenario. These countries (such as France and Germany) provide medical education at low cost or free and have high rates of graduate retention.

### Conclusion

These examples show that the relationship between labour economics and healthcare professional education is complex and dynamic and that well-meaning changes in one part of the system can produce unintended and unexpected changes in other parts. Simple solutions to individual problems are thus unlikely to work and indeed may produce adverse effects. Better outcomes may be produced by joining up undergraduate healthcare professional education, postgraduate training and continuing professional development. Also, it may be wiser to conduct small pilots of innovative models of education and evaluate the results of these pilots before embarking on grand education or workforce experiments. In this method, large scale problems should be avoided and successful models should be rolled out nationally. However, the financial and healthcare gains from improving healthcare professional education and labour economics are significant. Many previous studies that have looked at cost

and value in education have been modest in scope; and even when successful, they have relatively little potential for cost saving (10,11). However, new and successful models of healthcare professional education and workforce development have much greater scope to save costs and improve value.

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