Productivity Commission Health Workforce Review

Submission from:

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Introduction and aims

The health workforce is the key input into providing an efficient and equitable health care system, consuming around 70% of total expenditure on health care. Since it is a labour intensive industry, and is likely to remain so, the effective management of the workforce is fundamental to ensuring that the health system meets its objectives. However, the effective and efficient use of the workforce is also related to the institutional structure of the health care system and the incentives within it, such that reform of health professionals' labour markets is fundamentally tied to reform of the health care system as a whole.

The aim of this submission is examine a number of issues from the perspective of a group of economists who have expertise in researching health professionals' and general labour markets.

The submission will focus on:

1) the lack of research capacity and adequate data;
2) empirical evidence on the role of earnings and economic incentives in health care labour markets, and;
3) the role of earnings and economic incentives in the Australian health care labour market.

These areas are selected as they often do not feature in current debates about workforce issues, but should be given more prominence if the dynamics of the health care labour market are to be better understood and effective policy solutions developed.[2]

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[2] See Borland (2002) for a discussion of the economic regulation of the medical labour market. [1]

Research capacity and data

What is surprising is the lack of any co-ordinated academic research effort or capacity on research into the labour markets for health professionals in Australia. Although research is being conducted within a diverse number of medical and nursing schools, and by one or two economists, this research effort is not co-ordinated and there are no separate and focused research funding streams.

The current approach to workforce planning means that existing data that are collected seem to be concerned solely with estimating accurate numbers of health professionals for workforce planning purposes, to provide a basis for recommending increases in training numbers. [3] The singular focus on training numbers gives much lower priority to the costs and effects of the many other policies that can be used to increase supply and use the existing workforce more efficiently, and so national 'minimum' datasets are not useful in evaluating these other policies. Future forecasts assume a 'steady state' and do not include data on future changes in supply and demand conditions or productivity.[1]

What seems to be missing is any attempt to examine the determinants of health professionals' labour market decisions. The data that is collected, primarily to populate the demographic 'supply and demand' models, for example through the AIHW Medical and Nursing Labour Force surveys, contains little relevant information to analyse the dynamics of the labour market and the determinants of labour market decisions. These data simply describe *what* is happening, which although clearly useful, needs to be supplemented by data that can be used to infer *why* it is happening. It is this information that is most useful for policy. The surveys do not collect any information about what determines labour supply, such as household income, number and age of children, income and wages, job satisfaction, working unsocial hours and shift work, or other characteristics of the job. Current data are not linked over time, so it is not possible to track health professionals' movements in and out the labour force, jobs or geographic areas, or to examine the effect of these movements on costs, expenditure and productivity. HIC data could be used to track the movements of GPs and specialists over time, or to look at factors influencing prices charged (and hence expenditure) but this data is not available to researchers in a form that is useful.

Experience in the UK. The situation with data quality is similar in the UK. However, this is changing more rapidly as the health care workforce has been close to the top of the policy agenda for about 5 years now. The NHS set up a new R&D programme, the NHS Service Delivery and Organisation of Care R&D programme (SDO), and one of its roles is to commission research into workforce issues (http://www.sdo.lshtm.ac.uk). This has brought a number of disciplines and policy makers together to work on these issues including health economics, human resource management, and organisational psychology and so helped to build valuable research capacity in the area. There are now annual

[3] In page 13 of the Productivity Commission's Issues Paper, health care managers do not seem to be included as part of the health care workforce, yet are crucial for managing the system and implementing government policy.

national workforce surveys, conducted in every NHS hospital in the UK, that collect richer information than is collected for supply and demand models. There have also been reviews of the literature and evaluation of the impact of staffing levels on health outcomes, and more formal evaluations of policy interventions to increase recruitment and retention. Clearly, the path the UK has taken may not be applicable to Australia, but the general idea of building research capacity in the area seems fundamental to the promotion of evidence-based policy in the area.

Empirical evidence on the role of earnings and economic incentives in health care labour markets.

It is difficult to find any reference in government workforce planning documents or sponsored research on the role of earnings and economic incentives in the labour market for health professionals in Australia. Economic theory would tell us that expected earnings (prices in the labour market) have a very important role to play in influencing the career choices, specialty choices, and locational choices of health professionals. It also plays an important role in influencing clinical decisions and therefore the productivity of the health care system. Its use as a potential policy intervention in the labour market should be considered, alongside other policies.

There is evidence from other countries (US., UK, Norway) showing that earnings influence labour market behaviour and productivity in health professionals' labour markets. Most of the literature on factors influencing specialty choice comes from North America. Relative expected earnings across specialties has been shown to influence specialty choice, as have non-pecuniary factors such as generous vacation time, regular weekly work schedules, and shorter residency programmes.[2,3,4] This literature emphasises the role of expected future earnings opportunities and therefore the important role played by the career structure in influencing specialty choice. Changes to the career structure, and to rewards at each level of the career structure, might also influence productivity. Health professionals will work hard to enhance their future promotion prospects and earnings.[5] Any policies that change the career structure or structure of medical training may therefore alter future pay prospects, economic incentives and behaviour.

For health professionals who are employees (mainly nurses), a number of studies have used traditional economic labour supply models to estimate wage elasticities (the responsiveness of labour supply to changes in wages).[6,7] These have focused on the effect of an increase in wages on hours worked and on participation. For nurses, Rice found that a 10% increase in wages increased the hours supplied by nurses in the UK by 4%.[8] Skåtun *et al* used data on 2000 nurses from the UK Labour Force Survey (LFS) between 1999 and 2000, and found that a 10% increase in nurses' wages would result in a 1.1% increase in the probability that those with nursing qualifications not currently in the labour force would re-join nursing.[9] This is in addition to 5.5% increase in hours worked for those already working as nurses. Frijters *et al*. also used the LFS and found that a 10% higher wage for NHS nurses would reduce the percentage of NHS nurses leaving by 0.66%.[10] Askildsen *et al.*, in one of the more robust studies using longitudinal

administrative data for nurses in Norway, found that a 10% increase in nurses' wages would increase hours worked by 2.1%.[11]

For doctors who are employees, a 10% increase in earnings increased hours worked by 2.7% for physicians in the US.[12] Showalter and Thurston found only a 1% increase in hours worked for employee physicians in the US that was not statistically significant.[13] Self-employed physicians were more responsive, as hours worked increased by 3.3%. For hospital doctors in Norway, a 10% increase in wages were found to increase hours worked by between 3% and 3.4% in the short run and by 5.5% to 5.8% in the long run.[14]

The general conclusion from these studies is that the effect of wages on hours worked is moderate and inelastic, and that the effect of higher wages on recruitment and retention appears to be much smaller than the effect on hours worked. The issue is whether the cost-benefit ratio of using wages to increase labour supply is higher than other policies aimed to increase productivity, recruitment and retention.

For self-employed health professionals (mainly doctors), research has examined the effect of changes in fees and changes in the remuneration system itself. There is a large and diverse literature in this area, mainly from the US and Europe. This literature has been reviewed a number of times, with the conclusion that changes in fee levels and fee subsidies do influence doctors behaviour.[15] The literature on the effect of changes in remuneration systems, such as a change from fee-for-service to capitation payment, has also been reviewed.[16,17] Again, these changes do influence doctors' behaviour in predictable ways, such that fee-for-service encourages higher levels of services being provided compared to salary and capitation, although the evidence is not able to say whether this represents ineffective care. The benefits of blended or mixed systems of payment are that they reduce the extreme incentives of under or over-servicing, and are able to link payment to evidence-based practice (i.e. productivity defined in terms of the provision of cost-effective health care and clinical guidelines), where such evidence is available.[18,19]

The role of earnings and economic incentives in the Australian health care labour market

There are a number of specific aspects of the Australian health care system that are relevant in influencing the labour market decisions and productivity of doctors and nurses, in addition to those already mentioned above.

Doctors. Since GPs and specialists can charge fees at any level the market can bear, the total fee charged cannot therefore be used as a policy instrument by government to influence labour market decisions or productivity. The Commonwealth can influence behaviour to an extent by subsidising fees through the Medicare Benefits Schedule (MBS) or by providing additional payments and new fees. The MBS has been used to encourage more appropriate care in general practice, through the Enhanced Primary Care Items, Service Incentive Payments, and the Practice Incentive Program. These additional

MBS items and subsidies and the creation of a more blended payment system, rather than complete reliance of fee-for-service, is a step in the right direction, particularly where such payments can be linked to the delivery of evidence-based health care interventions. Additional fee subsidies have also been used to supplement the earnings of GPs in remote and rural areas, which may help to address shortages in these areas where equity of access is a concern. Fee relativities between health care treatments and between specialties, and the ability to link fees to evidence-based health care are the main areas where policy can be directed. However, this depends on the availability of evidence as to the relative priority of different health care treatments, and not just setting fees on the basis of the relative cost of providing the service. The distribution of MBS rebates across specialties is also relevant, as they will partly determine income earning opportunities across specialties that will influence specialty choice.[1] Moving away from a reliance on fee-for-service to a more blended system of payment needs to be explored further.

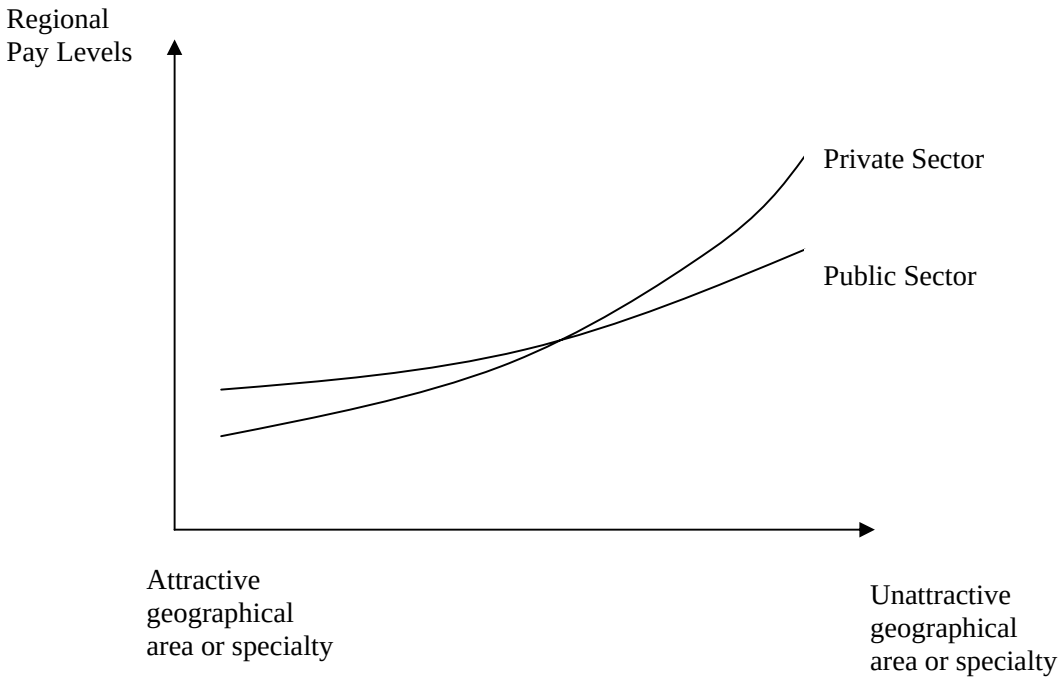
Fees (and therefore earnings) in this sector are flexible, and therefore will adjust more easily to changes in market conditions. Price flexibility is to be welcomed when other assumptions of perfect competition apply (such as consumer sovereignty and full information). However, when these assumptions do not hold, the flexibility to set prices provides incentives for inefficiency and a misallocation of resources. In health care, doctors have discretion to recommend additional follow up visits, other treatments or increase fees to maintain or increase their revenue, where this is threatened by changes in market conditions. There is potential for this to happen beyond the point which is optimal for patients, since patients are relatively uninformed, and the evidence-base for the effectiveness of different treatment options is weak. Since patients have less knowledge about health care treatments than doctors, particularly those in lower socio-economic groups who have the highest capacity to benefit, any increases in prices are likely to reduce demand for those who are most in need of health care.[20] This is likely to encourage inefficiency, supplier-induced demand and unequal access in the health care system.

Price flexibility also has implications for the geographical distribution of doctors. With no entry restrictions into geographical areas, the ability of doctors to set their own prices coupled with patients' lack of knowledge and lack of responsiveness to price, means that the more attractive geographical areas are likely to have an oversupply of doctors, and the least attractive areas, such as rural, remote and deprived areas, are likely to have an undersupply. A key issue is gathering evidence on patients' responsiveness to price changes (elasticity of demand). Again, HIC data could be used here if made available at the individual level.

Nurses. At the other extreme, the pay of salaried nurses and allied health professionals (AHPs) in the public sector is quite inflexible and negotiated through state-level employer bargaining agreements (EBAs). The ability of public sector employers to compete with private sector employers is likely to be reduced. In unattractive geographical areas and in unattractive types of jobs, the private sector will be able to compensate for these undesirable characteristics through having the flexibility to offer

higher pay and better terms and conditions. The incidence of trade unionism is much greater in the public sector generally than in the private sector. It therefore seems likely that the geographical pattern of pay in the public sector will be much less unequal than in the private sector. This is illustrated in Figure 1. Even if average pay were similar in the two sectors, the private sector will likely exhibit a much steeper profile than the public sector.

Figure 1. The pattern of wage differences between the public and private sectors



Under these conditions the public sector will overpay in some areas, areas to the left of the intersection, and underpay in others, areas to the right. If the private sector appropriately compensates its employees for differences in the cost of living and compensates them for working in less desirable areas, then the public sector will underpay in the high cost of living and high disamenity areas and overcompensate in the lower cost of living and high amenity areas. The consequence is an inefficient use of public sector resources, overcompensating some employees and under compensating others. This will have an effect on public sector vacancy rates and employee morale and performance. Where there is underpayment and in consequence persistent outstanding vacancies, other employees will have higher work loads, longer hours, stress will be higher and productivity lower.

Evidence of the effect of differences in pay between sectors on vacancy rates for nurses has been found in the UK.[21] In Australia, it is unclear how the current round of Industrial Relations reforms will affect the public health care sector. More flexibility in the private sector and the retention of EBAs in the public sector may increase the steepness of the

private sector curve in Figure 1 and make it even more difficult for the public sector to recruit and retain its staff. One option is to introduce geographically-based pay supplements within EBAs or in defined areas of geographical or specialty shortage.

Conclusions

The functioning of the labour market of the health workforce in Australia is currently a largely 'evidence-free' zone. Enhancing research capacity and the quality and nature of data collected seems fundamental in being able to achieve evidence-based policy solutions in an area which underpins the future provision of health services in Australia. Researchers are spread thinly around Australia with little targeted research funding. The data collected should focus more on identifying the determinants of labour market decisions rather than simply describing them. The wider availability of administrative datasets, such as HIC data, would help to advance knowledge about the efficient functioning of the medical labour market. Longitudinal surveys of the health care workforce (and for those that exist to be publically available) would also aid understanding of the dynamics of the health care labour market.

This submission has focused on the potentially important role of earnings and economic incentives as policy interventions to alter labour market behaviour and productivity. Prices are a key element in the efficient functioning of any labour market and the evidence suggests they do matter. However, there is little understanding of their effects on labour market behaviour and productivity in Australia. We also recognise that prices and remuneration are not the only factor and so it is also important to conduct research into the most cost-effective policy interventions to enhance productivity and influence labour market decisions. Many such interventions remain largely unevaluated, including increasing training places, subsidies in rural and remote areas, special recruitment and retention schemes and campaigns, and educational interventions.

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