# Health care workforce crisis in Australia: too few or too disabled?

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## ABSTRACT

- A key challenge for the Australian health care system is ensuring that the numbers, distribution and skill set of the health care workforce are adequate to meet the emerging health needs of an ageing population with increasingly high expectations of health care.
- Professional and government responses have given priority to increasing the overall numbers of practising clinicians by investment in additional training places.
- Another approach is to enhance productivity of the existing workforce by activating strategies of professional enablement that remove constraints imposed on clinicians by inefficient work practices and inappropriate training programs, maladaptive organisational attributes, misdirected financial and non-financial incentives, and adverse sociopolitical influences.


MJA 2009; 190: 689–692

The Australian health care system is currently struggling to ensure that the numbers, distribution and skill set of the health care workforce meet the health needs of an ageing population with increasingly high expectations of health care.

## How large a health care workforce is enough?

The Australian health care workforce (excluding community service workers) grew by 12% from 1996 to 2001, and by 23% from 2001 to 2006 — more than double the growth in population.[1] The "ideal" workforce size is often represented as a number per capita for each health profession, based on historical precedent with adjustment according to simulation modelling for anticipated changes in demographics; disease patterns; health care technology; and workforce entry and exit based on global competition, earlier retirement and shorter working hours.

An ageing population that increases service demand, coupled with an ageing workforce that decreases service capacity, is seen as the key equation in estimating workforce shortfalls.[2] This view has led to an increase in the number of Australian-trained medical graduates from 1348 in 2005 to 2442 in 2012, adding to the current massive influx of overseas-trained doctors, who accounted for 48% of medical practitioners in 2006.[1] Employers and training bodies obliged to provide postgraduate medical training to this vastly increased number of graduates are now under pressure.[3] The same challenges are even more acute for the nursing profession, with current shortages estimated at 10 000–12 000 nurses.[4]

Some net increase in health care workforce is clearly required, if only to catch up with net losses incurred between 1994 and 2002.[5] However, does an increase in overall clinician numbers necessarily equate with improved health care and outcomes? Studies in the United States suggest a weak link between population health and doctor supply; primary care is a possible exception.[6] Geographical regions with 60% more doctors than regions with the lowest per-capita supply perform no better in measures of mortality, quality of care, or patient satisfaction with care or perceptions of access.[7] If more doctors are needed, more primary care doctors than specialists are likely to yield better outcomes at lower cost.[6] These findings have implications for the diminishing proportion (currently 27%) of Australian medical graduates entering general practice.[1] Finally, previous supply increases in the US[8] and Australia[2] have not led to more doctors working in under-served communities with clearly documented unmet health needs.

## An alternative perspective: increasing clinician productivity

Increasing productivity of individual clinicians could considerably lessen our need to train or import large numbers of extra clinicians. The absence of reliable measures of productivity hampers robust assessments of health workforce output over time.[5] However, in a Canadian simulation model based on population health needs, increasing nurse productivity by just 0.5% per year and compounding it over 15 years would reduce the nursing shortfall by 20%, compared with a reduction of less than 3% if current training positions were increased by 20% or nurse exit from workforce was decreased by 20%.[9] As a practical example, the Releasing Time to Care program in the United Kingdom has freed up considerable numbers of hours of hospital nurse time for direct patient care.[10]

Rather than asking "How many more doctors, nurses, allied health professionals and other craft groups are required, other things being equal?", a better question may be "How many clinicians are required to do what, and how, for whom, under what circumstances?".[9] Intrinsic to this broader question are considerations of improving clinician productivity by various means of professional enablement that relate not only to clinicians, but to current and future patients and wider society.

## How might professional enablement enhance clinician productivity?

Reforms in several domains of clinical practice may act as system enablers for enhanced productivity.

### Clinical work practices

A considerable portion of clinician time — as much as 30%[11] — is siphoned away from direct, value-added patient care because of inefficiencies embedded in current work practices.

First and foremost, clinical interventions that are ineffective or of very marginal value should be discouraged, thus diverting time to more effective interventions. Funding for interventions should be linked with proven, evidence-based indications as determined by formal processes of health care technology assessment conducted under the auspices of a central government agency, using methods recently articulated for the Australian context.[12] Health care technology assessment has exerted considerable influence on clinician and policymaker behaviour in the UK[13] and Canada.[14]

Second, dysfunctional non-electronic clinical information systems, which create duplication and waste time, must be digitally reformed. Electronic personal health records stored on patient-

authorised web-based portals or patient-held "smart cards" would allow rapid access to patient data from different providers across multiple sites, thus improving patient safety and saving time and resources. Viable forms of electronic personal health records that have been received favourably in the UK[15] and the US[16] can be easily replicated here and serve as a forerunner to centralised data repositories accessible to all clinicians. The "holy grail" of fully integrated electronic health records might need to be abandoned for modular systems comprising an operating platform to which functionalities are progressively added with clinician involvement and appreciation of workflow issues.[17] A staggered approach to implementing, in succession, order entry, automated notes and records, and clinical decision support is capable of realising better care with reduced complications, mortality and costs.[18] Moreover, telemedicine applications ranging from patient–clinician messaging[19] to long-distance interclinician videoconferencing[20] enhance clinician productivity. For too long, such innovations have been thwarted by commercial interests, privacy lobbies, and government tardiness in developing e-health standards and governance frameworks.

Third, health care organisations, both small and large, should re-engineer current models of care that constrain clinician productivity. Recent large-scale service redesign projects in the UK[21] and Australia[22] have achieved modest success in making better use of clinics, operating theatres, hospital beds, and community services. Countless examples of small-scale innovations, both successful and unsuccessful, remain unreported and thus are not disseminated. Despite the profiling of exemplary case studies by organisations such as the Australian Resource Centre for Healthcare Innovation and the National Institute of Clinical Studies, widespread uptake of much of what has been learned about improving productivity occurs serendipitously (if at all), leading to wasteful re-invention and re-learning of past initiatives. A national registry or clearinghouse of service innovations, similar to clinical trial registries, could be established in which service improvement projects sponsored by government or organisations would be obliged to be registered and their results reported. A sophisticated search function would allow clinicians to quickly access field-tested ideas and strategies; consulting this resource could be considered mandatory for any business proposal for new or expanded services. In turn, managerial decision making needs to more proactively seek evidence and translate it into performance enhancement, using methods such as the Informed Decisions Toolbox.[23]

Fourth, current role delineations, job descriptions and award structures may be impeding the efficient alignment of skill sets with clinical tasks and thus require change. Appropriate delegation of medically supervised, protocol-led, lower-complexity tasks to newly defined positions of nurse practitioners and physician assistants has the potential to free up doctors for more higher-complexity tasks in settings where research suggests dividends in service enhancement, such as clinics[24] and nursing homes.[25] Nurse assistants and clinical support officers might achieve similar outcomes for senior nurses.

Finally, university medical courses and college training programs must provide flexible, streamlined, competency-based training paths that better equip graduates to deal with current and future "real world" health care needs.[26] Vertical training models (eg, junior doctors taught by specialists in training, medical students taught by junior doctors with better transitioning from undergraduate to postgraduate curricula), scenario analysis and role-playing, simulation training,[27] which includes acquisition of clinical reasoning skills,[28] student and trainee immersions in supervised "work experience" roles, and sophisticated performance assessment[29] are all required. Training also needs to emphasise the right balance between "generalist" and "specialist" skills within disciplines.[30]

### Organisational governance and human resource management

Clinician productivity is being sapped by bureaucratic imposts and inertia, poor human resource management, and failed systems of organisational governance.[31] This is despite a 50% increase in administrative staff between 2001 and 2006, including an 80% increase in nurse managers.[1] Unproductive tension remains between clinicians acting according to professional standards and managers driven by budget and policy imperatives. As recommended by the recent Garling Inquiry,[31] clinical councils headed by clinically trained chief executive officers should have equal standing with non-clinical managerial teams in evolving public hospital bureaucratic and clinical work practices and organisational culture. The same model could apply to private hospitals, Divisions of General Practice and residential aged care facilities.

At the coalface, clinicians should be spared time-wasting administrative intrusions devoid of capacity to demonstrably improve quality or efficiency of care, which, for the average general practitioner, consumes up to 9 hours per week.[32] Although clinicians must remain accountable, many bureaucratic tasks that are either patient-related (eg, applications for residential care, aged care assessment, and home care; authority Pharmaceutical Benefit Scheme prescriptions; work certificates; medicolegal reports) or organisation-related (eg, financial reports, rostering, credentialling and accreditation, service plans, corporate training programs) could be streamlined, harmonised, or, in some cases, eliminated without increasing the potential for misuse.

### Financial and non-financial incentives

Remuneration methods and non-financial professional inducements strongly influence workforce distribution and skill set. The current Medicare Benefits Schedule (MBS) overpays procedural specialists and other narrowly scoped practitioners involved in one-off operations or consultations, and underpays cognitive, generalist clinicians dealing with chronic disease over the long term. Despite the collapse of the federal government Relative Values Study initiative in the 1990s, fundamental revaluation of the MBS remains paramount. Blended payment schemes that combine simplified fee-for-service schedules for individual clinicians with "bundle of care" funding for multidisciplinary teams would encourage more comprehensive, coordinated care with improved outcomes at potentially lower cost.[33]

Ameliorating the shortage of clinician supply in under-served communities requires a composite of incentives[34] that are both financial: relocation bonuses, higher Medicare rebates, skill-based allowances, rural-bonded scholarship schemes; and non-financial: professional development (videoconferencing, distance learning packages), locum support, allied health availability, and well integrated "hub and spoke" health service networks.

Finally, mass introduction of a bevy of publicly reportable performance measures linked with accreditation and pay-for-quality schemes should be reconsidered, given their limited

evidence of effectiveness and opportunity costs associated with administration, data collection and analysis.[35] Indeed, inefficient use of clinician time and net harm may result if inappropriate adherence to guideline-derived performance measures evokes over-diagnosis and over-treatment in populations to which guidelines do not apply.[36] A better alternative is a more limited set of internally reported key measures linked with collaborative quality improvement initiatives that have improved care in both general and hospital practice.[37,38]

### Sociopolitical influences

The value of medical advice to patients and the public is limited by the inability of many to understand and engage in rational clinical discourse. Clinician time is also misappropriated by increasing numbers of the "worried well" presenting with somatisation disorder.[39] Introducing health literacy and promotion programs into schools,[40] universities and workplaces,[41] jointly funded by government health and education departments, can enhance physical and mental wellbeing, and foster disease screening and prevention, especially if didactic instruction is combined with family or community involvement and changes to local health culture.

Self-management and coaching strategies directed at selected populations with established chronic disease encourage patients to be more proactive in their own disease management, with better outcomes and more effective interaction with clinicians.[42,43] In cases of advanced or terminal illness, wider use of advance care plans would facilitate avoidance of care that is clinically futile and/or incompatible with personal preferences.

Finally, societal expectations of modern health care at an affordable cost are becoming unrealistic, and many parties are to blame — politicians, health executives, clinical opinion leaders, commercial interests, medical researchers and the media. Society is too insensitive to the narrowing nexus between benefit, harm and costs of many clinical interventions. Formal complaint or litigation is too readily used to compensate for unfavourable outcomes despite appropriate care, promoting the practice of "defensive medicine", which, by over-servicing, merely exacerbates the problem of iatrogenesis. Public involvement in efforts to rationalise and prioritise health services is possible,[44] and should be encouraged in guaranteeing a more sustainable health care system.

## Conclusion

In maintaining an accessible, safe, efficient and affordable health care system, simply increasing the health care workforce may not be the only or even pre-eminent solution. Strategies for increasing workforce productivity deserve more consideration to avoid consigning the next generation of clinicians to the same performance constraints that bedevil the well intentioned labours of the current generation.

## Competing interests

None identified.

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*(Received 14 Dec 2008, accepted 19 Mar 2009)* ❑