

Submission to the Productivity Commission study of Australia's health workforce

The Clinical Oncological Society of Australia
The Cancer Council Australia

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The Clinical Oncological Society of Australia (COSA) is the peak multidisciplinary society for health professionals working in cancer research or the treatment, rehabilitation or palliation of cancer patients.



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COSA provides high-level advice to the Federal Government on the clinical management of cancer in Australia. It is closely involved with Government in areas such as clinical trials and is being consulted on the implementation of the Government's \$189.4 million cancer plan.

The Cancer Council Australia is Australia's peak non-government national cancer control organisation. Its member bodies are the eight state and territory cancer councils, whose views and priorities it represents on a national level.



The Cancer Council Australia represents the interests of all Australians in reducing the impact of cancer, from prevention, detection and treatment through to supportive care. It is allied with COSA in developing cancer treatment and care policy aimed at achieving optimal patient outcomes.

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Please see Attachment 1 – Ideal Oncology Curriculum (separate pdf file)

Introduction

Most systemic health workforce inefficiencies relating to cancer also apply generally across the disease spectrum. There are, however, compelling reasons to focus specifically on cancer when considering productivity-based reforms to the system.

Cancer kills more Australians than any other single cause.¹ And it is predominantly a disease of older people,² therefore presenting an enormous challenge to health workforce resources as Australia's population continues to age.

In addition, while cancer care professionals welcome and take pride in Australia's status as a global leader in reduced cancer mortality rates,² our successes pose a new challenge: as cancer incidence rises sharply in step with population ageing, so too does cancer prevalence as patients also survive for longer periods.

Australia's increasingly multicultural ageing population also presents new challenges, in areas such as psychosocial care and access to services.

We also enter an age where patients are more empowered through internet-based information (not always evidence-based) about their illness and options for treatment. Rapid technological change will also have a profound impact; and patients will have heightened expectations about the possibilities and how the health system can support their needs.

Currently, around 270,000 Australians are living with cancer² – an unprecedented number of patients reliant on an increasingly stretched healthcare system. In recent years, Australia has been able to meet the cost of cancer care with a modest 5.7%³ of the national health budget. Clearly this will no longer be possible given the trends outlined above.

While meeting future need is impossible without a substantial increase in funds, it is understood that this study is looking at cost-neutral systemic improvements to boost efficiencies. We therefore present a number of observations about key systemic problems and recommendations to address them, based on wide-ranging professional experience across the healthcare education, service planning and delivery sectors.

General observations and recommendations

COSA and The Cancer Council Australia welcome this study and are committed to assisting the Productivity Commission in the development of recommendations to improve processes for training and planning Australia's cancer-care workforce.

The general problems of Australia's multi-tiered and fragmented healthcare and health education sectors have been widely documented elsewhere. We therefore offer more specific observations and recommendations, largely in terms of cancer care, and in the context of the terms of reference.

On pages 4 and 5 we provide general comment and summary recommendations, which are followed by specific input addressing each term of reference.

Demographic challenges and systemic problems

In our view, the key systemic training and planning problems facing the cancer workforce (and much of the health workforce generally) and the population pressures compounding them are:

- Unprecedented increase in cancer incidence and prevalence; marked disparities in cancer mortality and morbidity across population groups (eg, poorer outcomes for Indigenous and rural and remote communities).
- Fragmentation of the system across multiple tiers, compromising efficiency of training, planning, recruitment and retention processes.
- Established priorities based on requirements of disparate organisations rather than on Australia's national healthcare needs as shown by epidemiological data.
- Lack of standards in training curricula and a focus on process instead of the education system's capacity to deliver positive healthcare outcomes.
- No credentialing of individual practitioners nor accreditation of healthcare services.
- Poor working conditions, due in part to patient through-puts based on an individual clinician's willingness to meet demand rather than national standards determined by population need and each hospital's demonstrated capacity.
- Inadequate arrangements for clinical training.
- Unstructured career paths and lack of diversity in healthcare professional roles.
- Bureaucratisation and politicisation of government-funded health services.
- Overuse of high-cost clinical specialists where other professionals could provide services.
- No national framework to facilitate staff movement or re-entry across the system.
- No infrastructure for ushering in and adapting to rapid technological change.
- No national, independent approach to data collection and use.

Recommendations for addressing identified problems

- Federal Government to directly fund training places from a national pool, according to an evidence-based assessment of population healthcare needs.
- Introduce a system of credentialing, based on standard competencies and designed to facilitate career paths and staff movement across the system.
- National professional bodies to act as accrediting agencies, overseen by the Australian Medical Council with models of care approved by Cancer Australia.
- Expand credentialing to include epidemiology, encouraging a whole-of-workforce approach to understanding complex diseases.
- Adopt national models of multidisciplinary care.
- Implement The Cancer Council Australia's oncology curriculum model for skills development in chronic disease management.
- Continuously review competency standards and scope of practice in training curricula to reflect progress in service models such as multidisciplinary care.
- As recommended previously by the Productivity Commission, complement lengthy traditional education with streamlined options.
- Expand and support existing training services rather than create new small and dispersed centres.
- Explore innovative and flexible models for clinical training/competency development, such as virtual centres.
- Establish cancer centres in larger regional centres.
- Consider cost-effective ways for the delivery of less-complex services.
- Develop national guidelines on safe and acceptable patient numbers according to hospital capacity matched to population need.
- Enable cancer registries to act independently of governments/bureaucracies, according to a code of ethics; develop national models for the collection, storage and reporting of incidence, prevalence and outcomes data.
- Introduce a unique identifier for every Australian, with the capacity to continuously monitor their health status (according to strict privacy provisions).
- Introduce a national development program for harnessing technological change, including competitive sites for research and development.

Addressing the terms of reference...

1. Consider the institutional, regulatory and other factors across both the health and education sectors affecting the supply of health workforce professionals, such as their entry, mobility and retention, including:

(a) the effectiveness of relevant government programmes and linkages between health service planning and health workforce planning;

Current systemic problems

This first term of reference in itself raises a key systemic problem: the effectiveness of any government programmes aimed at improving the relationship between health service planning and health workforce planning will be very limited because of the absence of linkages across sectors.

The journey from recruiting potential healthcare professionals from secondary school through to the delivery of healthcare services is beset with a maze of cross-tier and cross-sectoral barriers.

Both the health system and the education system are subject to a two-tier, federal-state division of administration, across which there is very limited coordination, a breakdown of process and significant duplication of resources. In addition, there are major obstacles between the health and education sectors within the same tier of government.

In other words, there is a dysfunctional absence of integration both vertically (from federal to state) and horizontally (across sectors within the same tier of government). This is despite the fact that all sectors involved in the training, recruitment and retention of healthcare professionals should share a common goal: building a workforce that achieves optimal patient outcomes at best value for the taxpayer dollar.

Examples

Health data management

Fundamental to the development of the health workforce is a detailed, evidence-based understanding of the nation's current and future health needs. We cannot improve the system without having a much better profile of the nation's health status, through the timely collection, registration and sharing of epidemiological data.

Yet there are no standard, national definitions of epidemiology workforce roles, let alone a system to ensure an appropriate number of professionals are trained, placed and have a defined career path. This is typical of an unstructured approach across all healthcare and related disciplines (see following).

No whole-of-workforce approach

While resources are presently invested in national workforce planning, there is no mechanism to convert recommendations into practice. For example, the Australian Medical Workforce Advisory Committee (AMWAC) assesses medical workforce requirements, yet no systemic pathway or obligation exists for Australia's largely state-administered healthcare services to act on AMWAC's findings.

Moreover, attempts to generate efficiency gains from the current health workforce may be stymied by the fragmentation of the current system, which offers very limited scope to address the nation's changing needs in a coordinated and strategic way.

Presently, universities, colleges and other training centres for healthcare professionals do their own student intake planning according to individual business priorities. Similar fragmentation prevails down the line, with individual hospitals planning their staffing and recruitment numbers according to their own interests, rather than a whole-of-population, needs-based approach.

Nursing issues

Professional nursing services are pivotal to an effective and efficient health system. Barriers to optimal training, recruitment and workforce planning in nursing reflect problems across the health workforce, not only in terms of cancer care but across the system. (Two recent Commonwealth reports^{4,5} summarise the systemic problems in nurse education and placement.)

For example, universities have recently received increased funding for clinical education in undergraduate nursing courses. However, distribution of funds is subject to internal university policies and therefore not guaranteed to translate to improved and expanded nursing services.

Also, in efforts to increase demand for and completions of nursing courses, the Federal Government has capped HECS fees for nursing students. While the benefit is the attraction and retention of students in an area of skills shortages, the downside is that the policy limits a university's capacity to raise funds through fee increases. There is a strong view in the higher education sector that the HECS band for nursing is insufficient for the high costs of undergraduate nursing training.

Another key systemic barrier is that where universities have gained additional funding for nursing places, corresponding clinical training placements in the health system have often been unavailable.

Moreover, AHWAC nursing workforce planning has focused on a limited number of specialist areas, such as midwifery, mental health and intensive-care nursing, but there is no data on cancer nursing workforce requirements, despite cancer's growing prevalence.

Cost of importing skills

The absence of an effective, inter-sectoral planning framework causes Australia to rely on importing skills from overseas-trained practitioners, with variable results, a net cost burden and an ethical dilemma around draining skills from developing nations.

It is understood that measures to assess, supervise and regulate overseas professionals are more expensive than the training and support of locally produced professionals.

Recommendations

- Build effective linkages throughout the education and health sectors, from the student intake stage through to sustainable service delivery.
- Identify and fund training requirements nationally on a population-needs basis according to epidemiological evidence.
- Federal Government to directly fund training places in state-based institutions. Funds could be reserved from the national education and training budget, aggregated according to a detailed, evidence-based picture of national need, and allocated to state education departments to develop agreed numbers of graduates in specific disciplines.
- Commission national professional bodies to act as accrediting agencies – a role they often unofficially perform now. Their involvement would ensure a national approach; the standard of their programs is already overseen by the Australian Medical Council.

(b) the extent to which there is cohesion and there are common goals across organisations and sectors in relation to health workforce education and training, and appropriate accountability frameworks;

Current systemic problems

While it could be argued that the myriad organisations involved in health workforce training and education share broadly philosophical goals, there are no structures in place to enable them to formally collaborate on achieving measurable results.

Although minimum national curricular standards are expected to be met, individual centres for healthcare education are not evaluated according to healthcare outcomes; the development of courses is largely at the discretion of individual learning institutions.

Examples

Focus on processes, rather than outcomes

The Australian Medical Council and the Australian Nursing and Midwifery Council accredit healthcare training institutions to ensure their processes meet minimum standards. While this is essential, the focus is on safety and minimal quality assurance measures; what is lacking is a national framework that underwrites best practice and sets measurable goals in terms of patient outcomes.

In addition, while some specialist faculties (eg, the Australian New Zealand College of Radiology, Faculty of Radiation Oncology) set their own professional standards, there are no guidelines or frameworks for setting and pursuing common goals for many key professions, including epidemiologists and allied health professionals. This is exacerbated by the fact that many of these professionals are produced by individual training institutions that are in competition with one another – a disincentive to establishing common goals and taking a coordinated approach to achieve them.

Standard expert-body curricula

A good example of the system's incapacity to implement progressive, needs-based curricula is The Cancer Council Australia's national exit exams model (see Attachment 1). Developed and advocated by The Cancer Council Australia's education committee, the national exit exams would ensure all Australian-trained graduate healthcare professionals have an adequate understanding of cancer and how they can assist in its management.

Randomly changing service models

New and more flexible roles are rapidly evolving in response to ongoing innovation and changing health-care needs. Key examples of new roles include care coordinator and nurse practitioner. The scope of traditional roles is also broadening significantly. However, these developments are reactive; there are no known mechanisms within the education system to facilitate new approaches to service provision in a “whole-of-workforce”, cross-disciplinary way.

Cancer professionals and consumers continue to vigorously endorse a multidisciplinary approach to treatment and care⁶, with federal and state governments responding with increased interest and a range of individual initiatives. Yet there is no reflection of this trend in the health education sector, where undergraduate and postgraduate courses are delivered within rigid, discipline-specific boundaries.

Recommendations

- Implement The Cancer Council Australia's exit-exams model for skills development in chronic disease across medical schools. (See Attachment 1.)
- Develop a framework for identifying future health workforce training and planning requirements according to evidence-based need, rather than varied sectoral capacities and priorities.
- Review competency standards and scope of practice in training curricula to reflect progress in service models such as multidisciplinary care.
- As recommended previously by the Productivity Commission, complement lengthy traditional education with streamlined options to help effect a more flexible, responsive system. Quality assurance could be achieved by subjecting such courses to an accreditation/credentialing system.

(c) the supply, attractiveness and effectiveness of workforce preparation through VET, undergraduate and postgraduate education and curriculum, including clinical training, and the impact of this preparation on workforce supply;

Current systemic problems

Disincentives for potential recruits

Careers in comparable professions – eg law, sciences such as biotechnology – do not feature the disincentives in many ways unique to healthcare.

Healthcare provision is theoretically based on lifelong professional development and continuous learning, yet there is little infrastructure to support this noble ethic in practice. The reality is a workforce culture of high stress, over-stretched facilities, inadequate pay, long hours and bureaucratisation. This is a considerable deterrent to potential professionals. It is understood that a significant number of trainees, in whom career-development resources have been invested, drop out of the system because of such difficulties.

Unstructured approach to clinical training

While academic learning is an important element of professional training, practical skills gained within hands-on services such as hospitals make a profoundly important contribution to the development of a qualified professional. Yet there is no formal recognition of the training role played by experienced, qualified professionals (eg specialist clinicians); nor are there incentives, quality control, nor train-the-trainer programs for participating senior staff.

Some individual hospitals have taken the initiative to develop in-house procedures to facilitate on-the-job training and development, but these are not supported by any processes built into the health system. Some jurisdictions oppose the dedication of working time for continued professional development.

Under-use of limited resources

The absence of a national, coordinated approach as discussed previously leads to fragmented, inappropriate use of training and development funds. Notably, funds to set up new places of learning are often in effect duplicating infrastructures already in place, instead of investing in improving the more essential process of providing on-the-job, skills-based training (see above). It would also be more efficient and cost-effective to expand existing training services rather than create new and dispersed small centres.

Lack of career path

For many thousands of skilled healthcare professionals, there are limited career path and few opportunities for continuous professional development. Nurses, nurse practitioners and allied health workers in particular reach a stagnation point in their careers, which motivates them to seek work in other sectors (eg government, community, consultancy).

Where practitioners remain in the system, their career path almost invariably leads to management; the result is that those with the most clinical experience have the least clinical contact.

Bureaucratisation

Individuals attracted to careers in healthcare as a way of contributing to the common good are often disappointed to discover the level of politicisation and bureaucratisation of health services.

It is understood that health service delivery is highly politicised by nature, due to the associated level of public funding, community interest and policy contention. However, the absence of rigorous, evidence-based standards in the service planning and delivery provides unnecessary scope for health to be used as a “political football”.

Recommendations

In addition to recommendations under terms 1a and 1b, recommendations to boost the attractiveness and efficiency of the health workforce are:

- Develop a system to better facilitate on-the-job training – where many of the most critical skills are gained – within existing hospitals.
- Expand and support existing training services rather than create new and dispersed small centres.

- Establish a network of accredited clinical trainers to further facilitate practical skills development. For cancer professionals, this could be built into the proposed system for credentialing individual practitioners.
- Forge stronger links between tertiary and other learning institutions and seek more commonality across curricula – well beyond the bare minimum standards currently in place. This would create greater efficiency and career portability across the system.
- Draft a code of ethics, for the endorsement of the Australian Health Ministers Council and ultimately COAG, aimed at obligating all publicly funded health care services to operate with minimal bureaucratic and political interference.
- Develop national guidelines on safe, acceptable patient through-puts according to numbers of available clinicians (not based on an individual clinician's capacity to work dangerously long hours, as is often the case).
- Explore innovative and flexible models for clinical training/competency development, such as virtual centres.

(d) workforce participation, including access to the professions, net returns to individuals, professional mobility, occupational re-entry, and skills portability and recognition;

Current systemic problems

The fragmented, minimum-standards approach to professional development significantly limits the scope for flexibilities within the healthcare system.

There is no structured approach to facilitate the movement of professionals across the system. Where processes do exist, they are either ad hoc or developed voluntarily by individual services. Nor are there system-wide models for career-path development, nor processes such as professional alumni or recognition of prior learning to facilitate workforce re-entry or re-training. (The Committee of Presidents of Medical Colleges' education committee is looking at the development of guidelines and standards for re-entry.)

These problems are particularly relevant to nursing and allied health services. A salient example is breast-care nursing, a role which, in the absence of standard models of care, varies markedly according to individual practitioners and care settings.

Other specific examples/problems include:

- Different professional registration regimes in each state.
- Difficulties of small professional groups in managing poor-performing practitioners, re-entry into the workforce and certification of overseas graduates.
- Recognition of prior learning varies between professional bodies, restricting retraining and workforce flexibility.

Recommendations

- Develop structured career paths that build in greater diversity and forward planning.
- Develop a system-wide mechanism to facilitate employee re-entry.
- Ensure the proposed system of accreditation/credentialing builds not only competency but also recognition of additional skills and flexibility into the system.
- Develop modular nation-wide standards that apply in a variety of professions – eg agreed standards on psychosocial care for medical specialists involved in cancer care.
- Introduce minimum curriculum content standards and a common exit exam in the management of prevalent, chronic diseases such as cancer.

(e) workforce satisfaction, including occupational attractiveness, workplace pressure, practices and hours of work;

Current systemic problems

Bureaucratisation

In some cases, dedicated healthcare professionals can be demoralised if they perceive that their efforts may be being used for bureaucratic/political means. Healthcare professionals are subject to codes of ethics aimed at eliminating self-interest; yet there are no such instruments for ensuring reporting of health system performance and epidemiological data are used solely for the common good.

Cancer reporting

The politicisation of the health workforce is particularly acute in the area of data collection and availability; it is understood that politically damaging data on health outcomes can often be obfuscated, much to the frustration of those who gather it and those who rely on it to plan and develop effective services.

Recommendations

- Enable cancer registries to act independently of parliamentary government; develop national models for the collection, storage and reporting of data.
- Develop national models for the collection, storage and reporting of all health data nationally.
- Make cancer data immediately available to inform better workforce planning.
- Take a coordinated, regional approach to gauging the capacity of hospitals to treat cancer patients, determine likely regional need based on the latest data and coordinate/structure services accordingly.

(f) the productivity of the health workforce and the scope for productivity enhancements.

Current systemic problems

Cancer is particularly relevant to health-system productivity, with 88,000 new cases diagnosed in Australia each year and around 71% of the cost burden borne by hospitals.²

Additional cancer training for all healthcare professionals, as put forward in The Cancer Council Australia's proposed common cancer exit exam (see attachment 1), would improve management of cancer patients across the system. Subsequent improvements in patient outcomes and reduced patient numbers, through enhanced primary prevention, earlier detection, referral pathways, treatment and follow-up, would generate significant savings in hospital costs.

Overuse of clinical professionals

Clinical specialists often undertake work that may be delegated to appropriately trained and supervised supporting staff and allied health professionals; evidence should be sought to determine the cost-benefits of rationalising these tasks.

Recommendations

- As recommended previously by the Productivity Commission, consider ways to discourage the delivery of less-complex services by highly skilled practitioners through changes to funding mechanisms; one option would be to base MBS payments on the lowest-cost way of safely and effectively delivering the service.

- Collect evidence to help determine likely cost benefit.
- Build a mechanism into the proposed credentialing system to measure its capacity to deliver improved patient outcomes and associated efficiency gains.

2. Consider the structure and distribution of the health workforce and its consequential efficiency and effectiveness, including:

(a) workforce structure, skills mix and responsibilities, including evolving workforce roles and redesign, and the flexibility, capacity, efficiency and effectiveness of the health workforce to address current and emerging health needs, including indigenous health;

Current systemic problems

Lack of flexibility and continuous learning

Flexibility, mobility and efficiency in the cancer workforce are currently limited by the absence of a credentialing and accreditation system and career pathways that could underwrite best-practice clinical standards across a range of professions.

Healthcare workers in all fields and disciplines often become typecast, due to the lack of diversity built into career paths and a rigid approach to the provision of services. There are limited pathways for transferring skills across disciplines and throughout the treatment of different disease groups.

Under-use of, and a lack of structured support for, multidisciplinary care⁶ also contributes to this problem.

Pathology and pharmaceutical costs

The absence of links between systemic therapies and pathology practices is likely to create a significant cost burden as diagnostic and treatment techniques rapidly change and an ageing population becomes increasingly reliant on an already stretched pharmaceutical scheme.

One example is the new breast cancer drug Herceptin, shown to be particularly effective in the treatment of specific forms of the disease. However, there are insufficient flexibilities in the system to rapidly skill professionals involved in histopathology to ensure that this expensive drug is being used by optimally patients most likely to benefit.

Indigenous health

Indigenous people with cancer are twice as likely to die from the disease as non-Indigenous cancer patients.⁷ While some problems facing Indigenous people with cancer overlap with those in all remote communities, many are unique to Aboriginal and Torres Strait Islander peoples due to issues of culture, dispossession and poverty.

It is understood that advice on ways to holistically improve the health workforce to provide better cancer outcomes for Indigenous peoples should be obtained in consultation with Indigenous groups. We therefore support in-principle the cancer-specific recommendations made by the National Aboriginal Community Controlled Health Organisation (NACCHO).

Recommendations

- Use the proposed credentialing system to build diversity into inter-disciplinary roles, boost capacity, add flexibility and foster a culture of continuous learning.
- Formally implement multidisciplinary cancer care to facilitate skills exchange, incentives for a wider range of allied health professionals to become involved in cancer and additional flexibilities in the system.

(b) analysis of data on current expenditure and supply of clinical and non-clinical health workers, including the development of benchmarks against which to measure future workforce trends and expenditure;

Data collection and use

Timely, qualitative and quantitative epidemiological data is pivotal to key decisions around funding, training, structuring and distributing the health workforce. Without an accurate, up-to-date picture of the nation's health status and plausible projections, it is difficult to build a workforce based on current and future needs.

Presently there are no standard structures for involving disease-treatment experts in the collection and reporting of health data, meaning sub-optimal targeting of research criteria. This is compounded by a tendency towards gathering data according to bureaucratic, rather than clinical research and service planning, priorities.

Impacts on pharmaceutical costs

Inadequate real-time data on complex health issues adds to pharmaceutical costs, a growing problem as increasing numbers of expensive drugs become available and an ageing population becomes more reliant on them. The example of Herceptin (see previous heading) is again relevant; without clinical professionals involved in data collection and reporting, it is impossible to develop health budgets that incorporate projections around the future use of expensive pharmaceuticals.

Disease prevalence

Incidence measures the number of new diagnoses of a disease; prevalence looks at the aggregate of all patients living with illnesses like cancer. Clinical specialists add meaning to prevalence statistics by providing practice-based input to help facilitate workforce and service planning based on ongoing patient need.

Data fragmentation

Under current arrangements, health data is collected and managed by separate agencies in separate states and territories, operating independently and using non-standard criteria.

There are also no linkages between epidemiological data and the financial planning of health services.

Recommendations

- Develop a national system of data collection and management, with provision to operate independently of government.
- Expand specific elements of the accreditation and credentialing process to include epidemiologists, facilitating a whole-of-workforce approach to the understanding of specific diseases.
- Define roles in epidemiology which include the incorporation of clinical skills in specific disease areas.
- Introduce a unique identifier for every Australian, with the capacity to continuously monitor their health status according to strict privacy provisions.
- Create direct linkages between epidemiological data and the planning and funding of healthcare services.

(c) the distribution of the health workforce, including the specific health workforce needs of rural, remote and outer metropolitan areas and across the public and private sectors.

Current systemic problems

The unavailability of health professionals and trainees in non-urban areas leads to a range of significantly poorer outcomes for rural and regional people and the system as a whole,^{8,9} including:

- Higher financial and social costs.
- Difficulty in providing multidisciplinary care and psychosocial support.

- An over-reliance on visiting clinics.
- Health professionals working longer hours, more on-call and less often supported by trainees.

Recommendations

- Establish cancer centres in large regional centres, with the capacity to: employ oncologists, care coordinators, oncology social workers and psychologists; attract metropolitan practitioners; and provide outreach services within their region. Such centres could have formal links to urban centres for mentoring, continuing medical education, care coordination of complex/rare cases and conjoint appointments.
- Better distribution and support of training positions.
- innovative solutions and systems support of multidisciplinary care across distances/jurisdictions.

Undefined roles and responsibilities

A wide range of health professionals and large numbers of individual practitioners spend significant time undertaking similar general duties across the health system. While diversity should be essential to defining professional roles, it is also important that a structured approach be taken to ensure that the skills of individual practitioners are applied where they provide best patient outcomes and value for money.

Under the current fragmented approach, there is limited coordination of roles to ensure services are being undertaken by those best-placed to provide them. Conversely, the under-use of nurses and allied health professionals in broader fields imposes an unnecessary burden on healthcare costs.

Limited support for multidisciplinary care

Multidisciplinary cancer care facilitates a team approach to caring for individual patients, ensuring that services are provided according to each participating practitioner's area of expertise.⁶ This means roles and responsibilities can accurately match skill sets, helping to ensure that healthcare professionals make optimal contributions to the system.

Despite these and other advantages, Medicare provides very limited support for multidisciplinary care, creating a financial disincentive for practitioners to participate.

3. Consider the factors affecting demand for services provided by health workforce professionals, including:

(a) distribution of the population and demographic trends, including that of indigenous Australians;

The growing burden of cancer

Cancer prevalence is set to increase sharply over the coming years. Incidence of cancer grew by 34% between 1991 and 2001,² a direct result of population ageing – a demographic trend that is expected to continue.¹⁰

The rapidly emerging obesity epidemic (obesity/overweight is an important cause of a cancer) is also set to contribute to the unprecedented rise in cancer prevalence.

Expectations of cancer patients are also likely to rise, as new treatments become available and individuals grow increasingly aware of technological developments.

Population ageing

By far the demographic trend most affecting cancer incidence and prevalence is population ageing. Of people diagnosed with cancer (excluding non-melanoma skin cancers), 57.2% are aged 65 and over, compared with 32.6% in the 45–64 year age group and only 9.4% in the 15–44-year age group.²

Cancer also becomes more costly to treat as people age, with expenditure peaking in the 45-64 year age group for females and 65-74 years for males.²

The burden on the health system will be compounded by the increase in cancer prevalence. Currently, around 270,000 Australians live with potentially fatal cancers.² Treatment advances will see this figure also grow, as increasing numbers of patients survive for longer periods.

Rural and remote communities

Evidence consistently shows that people in rural and remote communities with cancer have significantly higher cancer mortality and morbidity rates than those in urban centres. This is supported by a range of research articles and the data collected by all state and territory cancer registries.^{8,9}

One report, published in the *Medical Journal of Australia* last year, indicated that people with cancer in regional NSW were 35% more likely to die of the disease within five years of diagnosis than people in metropolitan NSW.⁸

Around 30% of Australians live outside metropolitan centres¹⁰ – equating to approximately 600,000 people at risk of unacceptably inequitable cancer outcomes.

(b) likely future pattern of demand for services, including the impact of technology on diagnostic and health services;

Rapid technological change, exponential growth in demand

An unprecedented increase in demand for cancer treatment and care services will flow directly from demographic trends and the upswing in cancer incidence and prevalence.²

Access to emerging technologies will be keenly sought by future cancer patients, particularly as an increasingly computer-literate population becomes better informed about advances in medical technology and developments overseas.

However, the fragmented state of health workforce training, planning and service delivery leaves Australia at risk of being under-prepared for future demands and the random development of services to meet them.

Australia lacks a platform for the strategic, cohesive adoption of new technologies, with wide gaps in skills development and infrastructure, and a tendency to be reactive in adapting to change. This problem is manifest across the health workforce spectrum.

Examples

Areas of rapid and significant change in cancer diagnosis and treatment for which the workforce is clearly under-prepared include:

- **Gene technology:** the emergence of gene mapping, genetic testing tools (for example, BRCA1 and BRCA2 for breast and ovarian cancer, mismatch repair genes for colorectal cancer and HFE for hemochromatosis) and clinical trials of gene therapy. The pace of discovery is likely to accelerate over the next five to 10 years, with wide-ranging implications in terms of health system infrastructure, costs and patient expectations.
- **Molecular pathology:** a better targeted and more selective method than the empirical approach used in conventional pathology; expected to replace conventional pathology over the next decade.
- **Positron emission tomographic (PET) imaging:** a relatively new modality that uses computerised reconstruction of electronic signals to diagnose illness. PET has been shown to dramatically improve patient outcomes and reduce costs, yet it remains under-utilised and not supported in a coordinated way in training or service planning.
- **Radiation oncology:** radiotherapy has been used as a cost-effective and efficacious cancer treatment for decades, but recent advances in the technology have moved well ahead of Australia's capacity to harness them across the health workforce. Examples include Intensity Modulation Radiation Therapy and proton radiotherapy.

Recommendations

- Introduce a national development program for harnessing rapid technological change.
- Cancer Australia, in partnership with COSA, to develop competitive sites for technological research and development.

(c) relationship between local and international supply of the health workforce.

Note that previous observations and recommendations apply.

Additionally, in a cancer context, a key problem for Australia is its relatively small population, limiting our capacity to trial high-cost, technical treatments such as radiotherapy and making us reliant on overseas evidence for the introduction of new technologies. This contributes to the emigration of Australians skilled in the development and management of new technologies.

4. Provide advice on the identification of, and planning for, Australian healthcare priorities and services in the short, medium and long-term, including:

(a) practical, financially-responsible sectoral (health, and education and training) and regulatory measures to improve recruitment, retention and skills-mix within the next ten years;

Note that previous observations and recommendations apply.

(b) ongoing data needs to provide for future workforce planning, including measures to improve the transparency and reliability of data on health workforce expenditure and participation, and its composite parts.

Note that previous observations and recommendations apply.

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