Workforce development: planning what you need starts with knowing what you have

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Abstract

Health workforce planning and research occurs at both national and state/territory levels, but identifying current workforce availability and future workforce need is more problematic at a regional level. We report on the practical approach to workforce development taken by North Coast Area Health Service (NCAHS) in NSW, Australia.

The NCAHS plan considers the impact of workforce ageing, changes in casemix and volume predicted by population demographics, staff level guidelines associated with service enhancements, and changes in service delivery models driven by the need for economic efficiencies, greater investment in disease prevention and medical technological advancements. Finally, the paper addresses how workforce development plans can assist sustainable service delivery through targeted strategies in recruitment, retention and retraining.

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What is known about the topic?

Effective workforce planning is essential to ensure sufficient trained staff to meet the requirements for health care delivery.

What does this paper add?

This paper outlines the workforce planning and development of New South Wales North Coast Area Health Service. This process focused on data analysis outlining service needs and likely future supply of health care professionals.

What are the implications for practitioners?

Taking a long term approach to workforce requires a substantial rethink of the current recruitment and retention strategies; moving the focus from the traditional areas of current separation rate, refilling advertised positions and creating positions for new services.

THE PROVISION OF HEALTH SERVICES is contingent on the availability of appropriately skilled workforce, and the seven national principles of developing health workforce policy (Box 1) rely on evidence-based and population-focussed methodology.

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Workforce planning and research is well supported by government at both the national and state/territory level, but at a regional level the identification of available and projected workforce can be problematic given overall workforce shortages, the diversity of defined clinical roles, and the lack of readily accessible local data.[2]

Box 1 National Health Workforce Strategic Framework 2004 key principles[1]

- Ensuring and sustaining supply
- Workforce distribution that optimises access to health care and meets health needs for all Australians
- Health environments being places in which people want to work
- Ensuring the health workforce is always skilled and competent
- Optimal use of skills and workforce adaptability
- Recognising that health workforce policy and planning must be informed by the best available evidence and linked to the broader health system
- Recognising that health workforce policy involves all stakeholders working collaboratively with a commitment to the vision, principles and strategies of the Framework

2 Key stages of North Coast Area Health Service workforce development

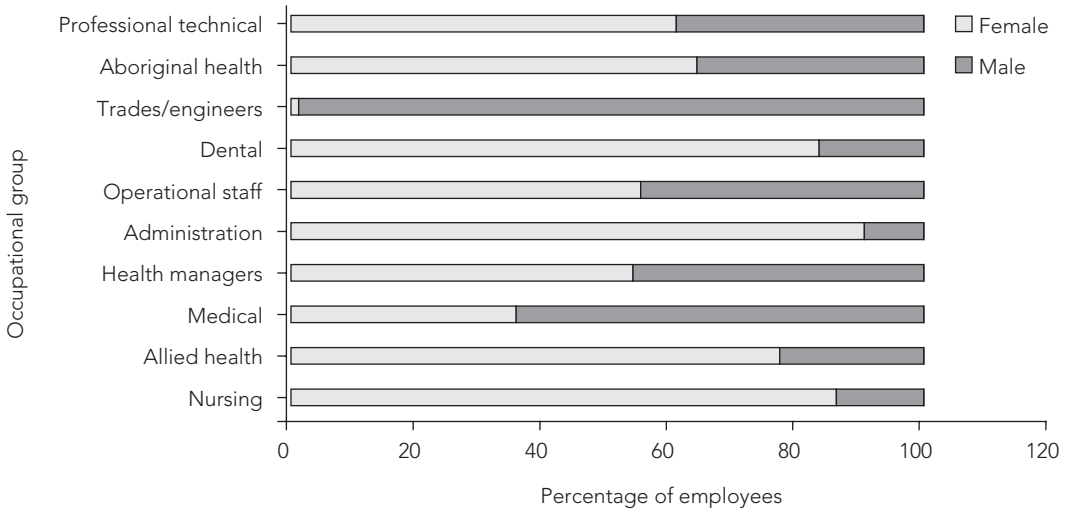
1	Strategy developed by Workforce Development Taskforce	Planning questions identified by North Coast Area Health Service senior managers' forum and refined following review of national and state health workforce plans
2	Agreement to the methodology by Workforce Development Taskforce (September 2004)	National Health Workforce Strategic Framework principles formed the basis for Workforce Development Plan, and draft NSW Health Workforce Action Plan guided the structure of the strategies and actions
3	Data identification and analysis	Alignment of workforce data sets with the Area Health Services Plan data to ensure consistency
4	Consultations with staff and consumer and community advisory group (November 2004)	Four staff consultations in key locations and consultation with the joint consumer and community advisory group. Separate consultations with staff informed local issues and strategies included in the occupational groups chapter
5	Survey of staff and stakeholders	Two electronic surveys were developed — one for staff (171 responses received) and one for external stakeholders (27 responses)
6	Identification of issues and testing of possible actions (November 2004)	Senior manager's forum workshop held to enable review of issues and comment on the feasibility of suggested actions
7	Identification of current and future workforce gaps and needs	Workforce strategies outlined in the Area Health Services Plan were reviewed and included in the Workforce Plan following analysis of workforce changes and trends. Consultations held with occupational groups to confirm accuracy of workforce profile and predictions
8	Workshop with Workforce Development Taskforce (April 2005)	Planning questions cross linked and referenced to the seven National Health Workforce strategy areas to ensure strategic alignment
9	Development of the report	The Draft Guidelines for Development of Area Clinical Workforce Plans, issued by NSW Health December 2004, used to develop chapters

Labour costs are by far the largest single item of expenditure by NSW Health,[3] and workforce must be used efficiently and cost-effectively. The increasingly competitive market for labour forces organisations to focus more attention on the needs of their staff and monitoring of staff turnover, reductions in workplace injuries and sick leave rates, incentives and career restructuring, participation in education and training throughout life and better access to training in rural and regional NSW.[4]

The demand and need for health services, and hence workforce, are not evenly distributed across populations or regions, but are driven by the interplay of changing population demographics and consumer expectations in the context of established patterns of service delivery. Areas with rapid population growth face increasingly complex demands[3] on their ability to meet changing service volumes and casemix, further influenced by new technologies and models of care, and the need for economic efficiencies and greater investment in disease prevention.

Covering an area of 35 700 square kilometres in north-east NSW and a population of 469 030, the North Coast Area Health Service (NCAHS) faces particular challenges with the fastest growing population of any NSW area health service (AHS). It also has the highest proportion of people aged 65 years and over, and this cohort has the highest projected growth rate; increasing from 18% (in 2001) to 21% of the total NCAHS population in 2011 compared with the state average of 13% to 15% of the total population over the same period.[5]

3 North Coast Area Health Service: employee sex by occupational groups



Need for health workforce

The supply of workforce has not kept pace with this growth in demand, with shortages of doctors, nurses and allied health professionals particularly evident at sites more distant from the coast. The workforce is also ageing, and it is projected that between 2006 and 2016 about` 30% of current NCAHS employees are likely to retire. Over the same period, demand for hospital services is projected to rise by about 25%. This potential for severe workforce shortages led to the establishment of the NCAHS Workforce Development Taskforce in 2004; to provide a strategy, vision and action plan for the region.

The key stages in the plan's development are outlined in Box 2.

Data were collected and analysed giving consideration to planning questions:

- How can the Area Health Service prepare for the possible loss of about 30% of the workforce in the next 10 years?
- What are the major changes in work practices and approaches to service delivery that will impact on our current workforce capability?
- How much will the ageing of the population increase demand for services in the next 10 years?
- What education and training is required to support safer practices and new approaches to service delivery?
- How can the Area Health Service attract and retain clinicians to small facilities and to areas of need?
- How can better collaboration arrangements with universities and other education providers be fostered to support our workforce development requirements?
- What is required to foster a positive and safe workplace culture that values all staff?
- How can the AHS maximise career development opportunities for the workforce in a manner that supports the organisation's outcomes and strategic directions?
- Where are the AHS's current gaps or areas of under-supply?

Current workforce for the NCAHS (comprising the previous Northern Rivers and Mid North Coast Area Health Services) was identified using combined payroll data. Payroll systems were similar for the two areas, but data definitions differed, requiring some manual collation. Key limitations of using payroll data are that it records staff by discipline not role, by numbers of staff rather than full-time equivalents (FTE), and only

4 North Coast Area Health service workforce, by age groups, Aug 2004

Category	Workforce 35 years and under (no. [%])	Workforce 50 years and over (no. [%])	Workforce 55 years and over (no. [%])	Workforce 60 years and over (no. [%])
Nursing	637 (17.3)	1076 (29.2)	377 (10.2)	130 (3.5)
Allied health	208 (32.9)	174 (27.5)	74 (11.7)	28 (4.4)
Medical	165 (44.4)	60 (16.1)	33 (8.9)	16 (4.3)
Health management	25 (8.1)	111 (35.8)	43 (13.9)	9 (2.9)
Administration	190 (20.4)	336 (36.0)	177 (19.0)	52 (5.6)
Operations	155 (15.1)	365 (35.5)	139 (13.5)	52 (5.1)
Dental	30 (26.1)	18 (15.7)	12 (10.4)	7 (6.1)
Trades/engineering	6 (7.2)	31 (37.3)	21 (25.3)	6 (7.2)
Aboriginal health	14 (26.4)	12 (22.6)	5 (9.4)	1 (1.9)
Professional/technical	64 (17.3)	103 (27.9)	49 (13.3)	20 (5.4)
Total %	1494 (19.7)	2286 (30.2)	930 (12.3)	321 (4.2)

employed staff (under-reporting medical staff who are often sessional or fee-for-service contractors). However, it offers benefits in being contemporaneous, readily available and cost effective.

The identified profile was 7577 staff (excluding Visiting Medical Officers) or 5106.3 FTEs by hours, with an annual separation rate of 7.9% (431.8) for permanent employees. Significant sex differences exist between occupations (Box 3), and influence projected ages of retirement.

Of the NCAHS workforce, 30.2% was 50 years and over, with only 19.7% of the workforce 35 years and younger and 4.2% aged over 60 years. To improve accuracy, retirement projections were mapped against actual separations each quarter, however, assuming retirement at age 55, the NCAHS will lose almost 15% of the workforce within 5 years and over 30% of the workforce by 10 years if staff retire at age 60. The occupational groups most at risk are nursing, health management, trades/engineering, administration, operations staff, professional/technical and aboriginal health. (Box 4)

The annual NCAHS vacancy rate is calculated at 13.8% (704.6). Reflecting the difficulties reported in attracting and retaining rural allied health staff, whose positions are often fractionated, the annual vacancy rate for this group was 36.15% compared with medical 8.9% and nursing 12.3%. Vacancy rates were also higher in the smaller facilities in the hinterland, where support for relief and back-filling of vacant positions requires negotiation with the larger coastal sites.

Using the data to predict workforce demands and identify gaps

Defining future workforce requirements is a complex task requiring detailed understanding of the factors affecting workforce participation. The NCAHS plan took into consideration:

- Areas of concern identified within the current workforce profile, particularly the ageing of the workforce; and examination of current workforce shortages;
- Predicted increases in existing service demands based on changing population demographics and volume and types of service;
- Professional staff-level guidelines for planned services enhancements (reasonable workloads for nurses/doctors, guidelines for allied health staff for rehabilitation services); and
- Changes in service delivery models and resultant workforce redesign and training needs.
- Workforce supply was examined in relation to current workforce profile, patterns of workforce participation, projected retirement losses, potential for new graduates and staff re-entry,

5 North Coast Area Health Service management age groups

Workforce category	Number in 2004	Average age	People 50 and over (no. [%])	People 55 and over (no. [%])
Executives	14	46.6	7 (50)	5 (36)
Senior managers (HSM 4, NM 5 or above)	57	49.9	45 (79)	24 (42)
Middle managers (HSM 2-3, NM 1-4)	350	52.0	277 (84)	248 (74)
Front-line managers, general admin (HSM 1)	245	48.8	147 (60)	97 (40)
Total	666	49.3	476 (74)	374 (58)

HSM = Health Service Manager. NM = Nurse Manager.

role augmentation of the existing workforce, and overseas recruitment.

Workforce attrition is influenced by many factors, and in developing strategies it is important to recognise the impact these may have on specific occupations. Box 4 demonstrates the rapid decline in Aboriginal staff numbers after the age of 55, and in the presence of 30% vacancies it is a particular concern for this sector that there are no local training programs to assist recruitment. Similarly, as the majority of our tradesmen are aged over 50, sensible forward planning will now see the introduction of apprenticeships.

The age profile of NCAHS management was another concern, with the average age at all levels of management remarkably similar. This risks the rapid loss of significant corporate knowledge — especially should organisational change result in any trend to early retirement and not be matched by succession planning with the creation of managerial traineeships for younger staff showing potential. (Box 5)

NCAHS was fortunate to have the development of the Area Health Care Services Plan 2005–2008 concurrent with development of the Workforce Development Plan. Specific workforce requirements linked to enhancements and new services were identified; such as recruiting recommended levels of specialist nursing, allied health, technical officers, radiographers, data managers, medical records staff and administration staff for the new radiation oncology services,[6] and medical, nursing, allied health, administration and hotel services staff to support additional inpatient beds and outpatient clinics. A local training program has commenced to address difficulties in recruiting specialist nurses for two new renal services and a high acuity service.

Patients aged 65–69 years use an average of 1.7 hospital bed-days per annum, which is 40% greater than notional average. For the 85-and-over age group, the average number of bed-days is 6.7 per annum, almost five times the average. Consequently, the growth in aged population in combination with their higher service use results in changing casemix and large projected increases in demand for services in our region.

The relatively low use of services and slow population growth of persons aged under 55 years means that there is a small decline in the demand for hospital services for those who will be under 55 years in 2016. Demand is projected to be about 3000 bed-days fewer for this age group, a reduction of 1.7%. In contrast, there will be a 40% increase in demand for hospital bed-days for the 65-and-over age group, which will then represent 60% of all bed-days. Overall demand for hospital services (in bed-days) is projected to rise by 25% between 2006 and 2016. This is an increase of about 140 000, from about 570 000 bed-days in 2006 to about 720 000 in 2016.

The staff required for a fixed number of inpatient beds is more easily calculated than for community services — mental health being one notable example. The broad bands used to collect patient data in some community-based services, such as oral health, significantly limit the accuracy of projections based on patterns of use by age. However, demands for allied health are

estimated to increase by 11% between 2006 and 2016. Ninety per cent of this increase is attributable to the over-65 age group, particularly for the 65–74 years age group where demand is projected to increase by 50%.

Workforce development strategies

To achieve sustainable service delivery, the data must not simply be collated for curiosity but must inform changed strategies in recruitment, retention and retraining.

Our region drew on local knowledge and international workforce literature to identify strategies that target the differing sex[7] and generational[8] patterns of workforce participation, including promotion of regional recruitment, service and workforce sharing and staff retraining and retention.

One significant challenge in workforce development is the way people perceive their work environment, including their work–life balance,[9] and NCAHS is undertaking an organisational culture survey. While the north coast region appears geographically attractive, many professionals move here for lifestyle and do not wish to work full-time. This is exacerbated by the influx of tourists to the area during the holiday periods when many staff also request time off with their families. Further, a family-friendly workplace culture is becoming increasingly important for retention of older staff with carer responsibilities.

Rural registered nurses are older on average than their urban counterparts, and although they appear to retire later[10] their role in maintaining health service delivery is critical. Interestingly, several of the strategies we designed to increase recruitment have had an effect on retention; one example being the website featuring vignettes of local nurses who enjoy their work, which some staff report improves morale: http://www.ncahs.nsw.gov.au/nursinglife/.

Opportunities for flexible work practices are limited at the ward level, but warrant investigation to retain senior nursing staff who may intend leaving due to musculoskeletal injury and instead might continue as student supervisors or retrain as managers. Other strategies include the development of nurse managerial job sharing[11] and changing role-mix through workforce redesign.[12]

Recognising that within priority service areas work might be reorganised to minimise duplication of effort, emerging trends in health care delivery put an emphasis on self-management, ambulatory treatment and better utilisation of technology. Ensuring any workforce redesign is patient focused thus requires ongoing input by users and carers as well as consideration of patient service and patient flow aspects. There is a growing need to align competencies with job role requirements and the allocation of an appropriate skill mix to meet the models of care/service delivery requirements. Examples exist across and within professional disciplines wherever tasks are allocated to less qualified, but appropriately supervised and supported, staff. Thus the long waiting list for physiotherapy is reduced by the qualified physiotherapist writing a program delivered by the physio aide, and professional development enables enrolled nurses to reach defined competencies to administer medications or give injections.

Consequently, particular attention is being given to the role of education in recruitment, retention and retraining. Rural workforce models are poorly captured in data that is discipline-specific as they commonly involve multitasking, for example: Aboriginal health workers providing community transport as well as some nursing duties; nurses who overlap with podiatrists in performing diabetic foot care; and dieticians who provide diabetic education. The consensus is that these blurred boundaries necessitate the development of new structures of appropriate delegation and supervision and do not fit easily into existing academic modules which are individual health discipline focussed and inhibit the development of the multidisciplinary, team-based approach to health service delivery required in the workplace. Further, current award structures do not adequately recognise the higher level of skill and service subsequently delivered.[13]

To create generic health worker positions, a diabetes therapist, for instance, would need a range of competencies to meet the needs of a

person suffering from diabetes, including foot care, nutrition, health promotion, wound care, and eye assessments. This would require a local workforce role review and redesign initiative,[14] as well as significant liaison with regulatory authorities and industrial bodies.

NCAHS strategies therefore have required the creation of new partnerships, beginning with the vocational education and training sector to establish trades apprenticeships and to develop locally based training for allied health assistants and for Aboriginal health workers. A cross-sectorial committee has been formed, which will also look to increase recruitment into health careers from within local high schools, giving specific consideration to strategies within the NSW Health Aboriginal Workforce Development Strategic Plan 2003–2007.

Meanwhile, immediate shortages in anaesthetic, emergency and critical care with projected shortages in orthopaedics and general surgery led to specific strategies to attract medical staff including remuneration packages, applications for specialist area-of-need recruitment status and stronger links with academic bodies including the Coffs Harbour Rural Clinical School and Northern Rivers University Department of Rural Health.

Other strategies that influence workforce participation are outside the control of the AHS, including superannuation reform and review of industrial awards, and require advocacy for change.[15]

All the strategies laid out in the Workforce Development Plan are viewed as core business of the health service, and implementation of workforce development has been incorporated into annual performance agreements of the Area's executive team, with a steering committee that meets quarterly to review the progress of implementation processes.

The implementation processes have been detailed, and the timeframe is divided into three stages: the first stage current to 18 months will address the immediate gaps in service delivery; the second stage December 2006 to 2010 addresses aspects that may require additional enhancement funding to ensure that service development is commensurate with the community needs; the third stage is aimed at having all previous strategies implemented and functioning to ensure that the NCAHS meets its workforce requirements within the next 5–10 years.

Conclusion

Taking a long-term approach to workforce requires a substantial rethink of the current recruitment and retention strategies; moving the focus from the traditional areas of current separation rate, refilling advertised positions and creating positions for new services. There will be an ongoing need to examine the current roles within the workplace and ensure these reflect the current and future demands for service delivery.

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Competing interests

The authors declare that they have no competing interests.

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