



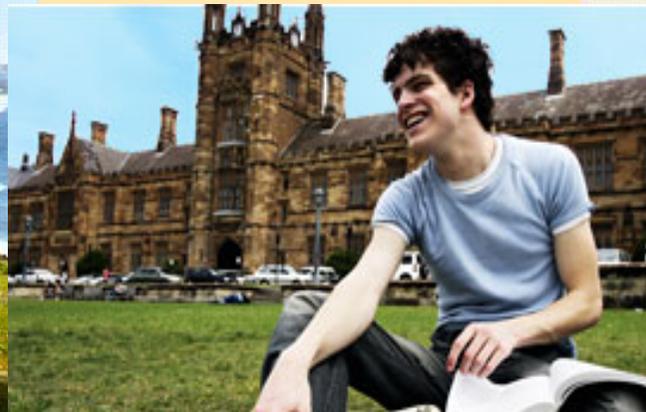
The University of Sydney



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Medical Workforce Data in Australia

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Overview

- Introduction
- Health Workforce Planning – what Australian data is used for
- Australian health workforce data sources – strengths and limitations
- Future directions



Introduction

- Need for high quality medical workforce data in Australia due to ageing population, technological advances and international demand for health professionals
- Health workforce planning requires information on supply, demand, and service utilisation
- This presentation outlines the type of information needed to facilitate effective workforce planning, and the data collections currently available in Australia



Health Workforce Planning – what Australian data is used for

- Health workforce supply: data requirements
 - Demographic characteristics of the health workers
 - Qualifications
 - Geographic location
 - Entrants to the workforce (contemporary and projected)
 - Exits from the workforce (contemporary and projected)
 - Health workforce flows
 - Workforce characteristics



- Health workforce demand: data requirements
 - Demography of population, current status, trends and projections
 - Socio-economic characteristics
 - Expenditure trends – per head, per GDP, raw figures
 - Health needs
 - Characteristics of service delivery entities



- Health workforce and service utilisation: data requirements
 - Services/procedures provided
 - Workforce(s) utilised
 - Expenditure
 - Access to services



An example application – what are the issues?

Retirement from the psychiatry workforce and associated Qs

- Ageing (Medical workforce survey) ✓
- Hours worked (Medical workforce survey) ✓
- Gender change (Medical workforce survey) ✓
- Trends in conditions treated
- Incoming training numbers ✓
- Retirement - or other reason for leaving workforce? eg change of career
- Drivers of retirement eg superannuation, availability of part time work, satisfaction, dependents, spouse - currently no information available
- Regions at risk – regional data not reliably available for some data sources
- Costs – to patients and Government (Medicare) ✓



Australian Institute of Health and Welfare National Health Labour Force Survey Collections

- Data collated from auxiliary collections conducted in association with professional registration processes
- Strengths
 - Comprehensive annual profile of the Australian medical, nursing and some allied health workforce
 - All registered health professionals at annual renewal of registration, including those overseas, not in the labour force
 - Cooperation of registration boards maximises response and minimises cost



- Limitations

- Interns, short term temporary resident doctors not usually included in the data collection
- Variation in response rates by State and Territory and by region with States; local area estimates are untenable
- Variation in response rates by age of practitioner
- Interpretation of response affected by practitioners registered with more than one medical board
- No information on earnings



AIHW National Public Hospital Establishments database

- Collated from administrative collections covering hospitals and includes data on hospital resources and expenditure
- Limitations
 - Fails to distinguish among different categories of salaried medical officers
 - Trend figures for salaried medical officers difficult to interpret over time as numbers of salaried specialists have increased rapidly
 - Does not indicate which category of medical staff was responsible for care of each patient
 - Changes in classification mean that time series data may not always map exactly
 - Does not indicate the efficacy or efficiency of different workforces or physical equipment



AIHW Bettering the Evaluation and Care of Health (BEACH) database

- Collated from a large national rolling sample of GPs
- Data on doctor-patient encounters, demographics and work characteristics of GPs, patients' demographic characteristics, and health characteristics
- Limitations
 - Data collected only from vocationally registered GPs who volunteer to participate
 - Other medical practitioners providing primary care services not included
 - Sample size limits geographic disaggregation of the data, affecting reliability of some estimates for smaller rural and remote areas



Australian Bureau of Statistics (ABS) National Census of Population and Housing

- Five yearly, comprehensive coverage of all occupations based on self description
- Strengths
 - Measurement of long term trends in Australian health workforce numbers and characteristics
 - Availability of data not included in other collections:
 - Labour force participation by age and sex of persons with a highest qualification in medicine
 - Marital status and age of children
 - Country of birth and language spoken at home
 - Small area data on composition of the health workforce



- Limitations
 - Active medical practitioners mainly working in non-clinical fields of medicine are excluded from the published figures
 - Not all workforce categories sufficiently disaggregated for use in detailed workforce planning
 - No definition of nurses by area of specialty practice
 - Unknown level of non-response to the occupation question for which no adjustment has been made in the published numbers
 - The census is only undertaken every five years, and the data for one census are considered out of date well before the next census.



ABS National Health Survey

- Information on the health status of Australians, their use of health services and facilities, and health related aspects of their lifestyle
- Strengths
 - Monitor trends in health and health care usage over time
 - Covers urban and rural areas across all states and territories and includes residents of both private and non-private dwellings
 - Data on consumers' perceptions of their encounters with health providers
- Limitations
 - Not focused on health labour forces
 - Consumers' perceptions are not subject to validation



ABS Private Medical Practice Survey

- Provides data on profitability of private medical practice
- Limitations
 - Doctors with low levels of activity excluded; workforce data not directly comparable with data from other collections
 - In large medical centres, doctors counted as a single practice if one legal entity but as separate practice if multiple legal entities despite similar costs and service provision
 - No data on individual net pre- or post-tax incomes
 - Does not adequately distinguish between income earned from public VMO income and private hospital/community practice work



Registration boards/

Australian Medical Council (AMC)

- Provide benchmarking data (numbers of registrants by age and sex)
- Ability to extract particular categories of doctors, such as those qualified in a particular year or country from AMC database
- Limitations
 - Reference/registration period is not always suitable for all applications
 - Boards do not cover all health professions
 - Labour force status unknown
 - Allied health definitions not consistent across jurisdictions
 - Information about specialist nurse workforces not captured



Professional associations

- Nursing, medical and allied health professional associations collect information about members including age, sex, location, area and hours of employment, higher qualification, students, continuing professional development, place of work, sector of main employment
- Limitations
 - Membership not mandatory; data does not reflect the workforce in its entirety
 - Level of information collected varies across associations



Australian Government Department of Health and Ageing/Medicare Australia

- Numbers and characteristics of doctors and other practitioners who have a Medicare provider number
- Strengths
 - Complete coverage of the workforce since 1984-85, for specialties in which all specialists are active Medicare providers
 - Annual growth in the Medicare provider workforce a good indicator of annual growth in the workforce as a whole
 - Medicare provider data easily linked from one financial year to the next
 - Can identify providers of outreach services to rural areas and interstate populations
 - Reliable data available just weeks after the end of a reference period



- Limitations
 - Data of little assistance in disciplines with a high level of salaried employment
 - In primary care, Medicare data cannot distinguish among type of doctor for ‘other medical practitioners’
 - Doctors who render one or more Medicare services in a given period are counted as providers but would be classed as inactive in other data collections
 - Sex, year of birth and year and place of basic qualification are not known for some doctors
 - Some providers with more than one stem number may be counted more than once
 - Does not indicate over or undersupply, only what was utilised



Other Australian Government departments

- Department of Education, Science and Training (DEST)
 - Number of commencing students in each course
 - Number of student course completions
 - Number of graduate students who register to practice
 - Data for specialist postgraduate nursing students is difficult due to inconsistencies in course nomenclature



- Department of Immigration and Multicultural Affairs (DIMA)
 - Information on temporary visa and permanent migration of workforces
 - Data include age, sex, country of previous residence, purpose of migration, duration of stay
 - Does not define the specialty practice of the nurses who are migrating into or out of Australia
 - Does not provide geographic location of visas, other than by state
- Department of Employment and Workplace Relations (DEWR)
 - Survey based data on shortages of skilled workers, including health workers but data are not available by small geographical area



- Department of Veterans Affairs
 - Information on the health care provided to veterans
 - Admission data for public and private hospitals and day procedure centres
 - Number of medical and pharmaceutical benefits paid and cost per person
 - Number of allied health services accessed and average cost per service
 - Number of community nursing services provided and average cost per person



National Centre for Vocational Education Research (NCVER) Ltd

- Not-for-profit company owned by the state, territory and federal ministers responsible for vocational education and training (VET)
- Provides information on
 - the number of students commencing and completing vocational courses related to health occupations, including level and field of education, student characteristics, and level of activity
 - Demographic features of students enrolled in courses related to health occupation
 - Employer characteristics of students/apprentices in courses
 - Characteristics and program information on apprentices and trainees
 - Financial information, including revenues, expenses, assets, liabilities and cash flows



- NCVET conducts two major surveys to provide statistical information about the VET sector within Australia
 - Student Outcomes Survey gathers information on students including their employment situation, reasons for undertaking their training, relevance of training to their employment, level of satisfaction, and any further study aspirations
 - Survey of Employer Views collects employers' views on vocational education and training. Both employers who have hired a recent VET graduate and those who have not are included



Specialist colleges

- Number and location of fellows, age and sex, vocational training placements and trainees
- Profile of trainee numbers, year of progression through program, age and sex of trainee, number of graduates per year and trainee intake per year
- Some undertake workforce surveys of their numbers
- Limitations
 - Data limited when considering wider workforce planning
 - For nursing colleges, membership is not a requirement for entrance to the specialty



State/Territory Health Departments

- Some data available from administrative and payroll databases
- Collected on either real time basis or at regular intervals
- Permits workforce to be tracked over time and comparisons across industries



Other data sources: Aboriginal Medical Services (AMS)

- Data collected annually from all Government funded Aboriginal primary health care services
- Response rate around 96%
- Number of client contacts made
- Total episodes of care by state/territory and remoteness category
- Location of services
- Number of FTE health positions funded by the AMS and number of FTE vacancies, by category



The data jigsaw

More doctors, but not enough: Australian medical workforce supply 2001–2012

Catherine M Joyce, John J McNeil and
Johannes U Stoelwinder

MJA 2006; 184 (9): 441-446



Data sources

- Current supply - National medical labour force survey New medical graduates
- Completions of medical degrees - Department of Education, Science and
- International medical graduates entering workforce – AIHW, AMWAC, other
- Attrition from the workforce - Monash Medical Graduates Survey
- Deaths - ABS



- Intake to training programs – Medical Training Review Panel; AMWAC; Monash Medical Graduates Survey; General Practice Education and Training (Trainee statistics, pers. comm.)
- Movement between occupational groups –
- AMWAC, Monash Medical Graduates Survey
- Full-time equivalent workforce - medical labour force survey, AIHW
- Per capita workforce - Population projections ABS



Future directions

- Despite a rich supply of health workforce data there are a number of notable omissions
- Many data sources are profession specific and as a result it is difficult to make comparisons on some measures between professions.
- Very little longitudinal data
- There are a number of developments on this front although there is still ample room for greater work in this area.



Medical Schools Outcomes Database Project

- Run by the Medical Deans Australia and New Zealand (formerly CDAMS)
- Demographic, educational and career intention data collected across all medical schools from 2006 onwards
- National database to provide basis for short and long term monitoring and reporting on outcomes of Government funded health and medical education programs



Careers in Rural Health Tracking Study

- NRUDRH, through the University of Sydney
- Longitudinal, multidisciplinary study tracks students from university through the early stages of careers
- Where do students want to work
 - Rural, remote, urban, or overseas?
 - What regions of Australia?
 - Coast or inland?
- When they want to work in towns of different sizes
- What factors are important when deciding practice location
- How preferences change over time

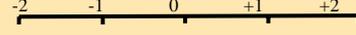
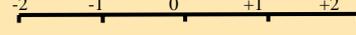
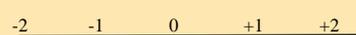
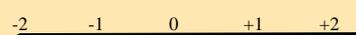
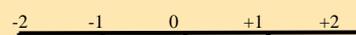
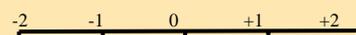
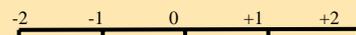
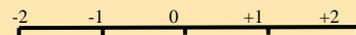




To what extent would each of the following factors influence your choice and that of your spouse/partner (if applicable) to work in a rural area? *(please circle)*

Key: -2 = Strongly Discourage -1 = Slightly Discourage 0 = Neutral +1 = Slightly Encourage +2 = Strongly Encourage

You



Living close to Family

Living close to friends

Rural lifestyle/culture

Cost of living

Cost of accommodation

Availability of public transport

Career opportunities

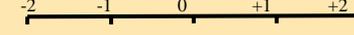
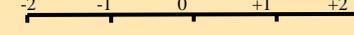
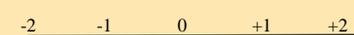
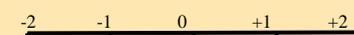
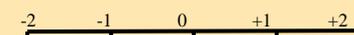
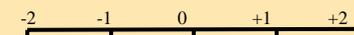
Remuneration

Workload

Variety and nature of work

Environment for raising children

Spouse/Partner





Dentist retirement intentions study

- Currently, limited data provides the richness required to explain medical practitioner or other health professionals choices
- Dentist Retirement Intentions Study (to begin in 2007) will examine the influences on retirement decisions including:
 - Practice location
 - Income
 - Superannuation
 - Sale of practice
 - Assets/debt
 - Ill health
 - Family (dependants)
 - Other interests



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