MODELS OF CARE – A POSSIBLE APPROACH TO WORKFORCE PLANNING

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Workforce planning for the provision of health care services is of growing importance in many countries because most are confronted by increasing demand for health services, advancing technology, changing models of care, limits on financial resources, and health workforce shortages. Nationally, and internationally, traditional approaches to the staffing and organisation of health care services are being challenged and more efficient, less fragmented models and more consumer focussed models are being explored and established.

Health workforce planners at all levels are being challenged to facilitate these changes through the development of new planning models that favour better linking workforce planning with health services planning. Multi-professional/multi-occupational and multi-functional approaches to workforce planning are being explored. This paper explores possible approaches to models of care health workforce planning.

Background

It appears that little has been published, either nationally or internationally, that specifically addresses a 'models of care' approach to health workforce planning. On the other hand, publications that address the need to change existing models of care to improve patient care (eg achieve improved integration of service delivery) are more prevalent (Weeramanthri et al., 2003). Also more prevalent are publications that address redefining who does what in health care based on identification of competencies required to perform defined functions (National Health Service 1999; Victorian Department of Human Services 2000).

The need to explore new approaches to workforce planning is being driven by demographic changes and changes in the health system. First, most of the illnesses burdening today's health consumers are complex to manage with input required from several health disciplines. Secondly, the demand for health care is growing at rates that funders (government and private) find difficult to sustain. More efficient ways of using the workforce are being actively sought to ensure acceptable levels of access to services. Thirdly, workforce shortages range across health disciplines, specialty areas, particular service areas, and geographic areas. In the face of these shortages, service agencies are seeking new ways of responding to demand (eg job-redesign, workforce re-engineering and a greater emphasis on community-based care and on self-directed care). Fourthly, in Australia in the longer term the available pool of a potential future workforce is shrinking (AHMC 2004).

Faced with these pressures, Australian health workforce planners are being challenged to work with health care service providers to facilitate new, more consumer-focused and cost-effective ways of using the health workforce. Multi-health-professional and multi-functional approaches to health workforce planning are being called for and several States have undertaken pilot projects using a 'models of care' approach. However, to date no national workable 'models of care' approach has been developed, although national projects are underway in the areas of emergency care, diabetes and the perioperative workforce.

The Australian National Health Workforce Strategic Framework (April 2004) defines health workforce in its broadest context, referring to the workforce that provides health care to the Australian people; ranging from workers with no formal qualifications providing support services in home based settings through to highly qualified specialists working in technology intensive super-acute hospital settings. Care is also considered in its broadest context and as such includes prevention, promotion, diagnosis, testing, treatment, rehabilitation and palliation (AHMC 2004).

WHY THE INTEREST IN A 'MODELS OF CARE' APPROACH TO WORKFORCE PLANNING?

Changing models of service delivery

As the population ages, morbidity patterns change and the need for health services changes and increases. Chronic health problems have become and will remain the dominant focus of the health system for the foreseeable future (AIHW 2000). Leading causes of 'Burden of Disease' in Australia in 2000 included:

- ischaemic heart disease;

- stroke;
- depression;
- cancer (lung, breast and colorectal);
- dementia;
- chronic obstructive pulmonary disease;
- diabetes mellitus;
- asthma; and
- asteoarthritis.

These chronic health problems are frequently complex to manage requiring close linkages between home, primary care services, hospital and nursing home care. For example, a person recovering from a stroke admitted to hospital after a fall may require acute care, rehabilitation, and a range of home and primary care services. New models of care have emerged designed to improve linkages among service providers and consumers and carers.

Consumer access to medical information has improved and their expectations of health professionals have increased and changed. The Internet has enabled consumers to gain access to information about health and illness and as a consequence many come to their health workers armed with the latest evidence of treatment effectiveness. Consumers are also more aware of safety and quality issues and more litigious. Given these changes, new models of provider-consumer communication have developed, models that are patient-empowering and that promote self-management of chronic conditions (Best and Norman 2003).

Technological advances in medicine have frequently changed and increased the type and complexity of the work required of health professionals and other members of the health workforce and new models of service delivery have, and will continue to evolve. The expectation is that in the future advances in technology will accelerate as will their uptake. For example, advances in surgery, radiology, pharmacology, nanotechnology, gene technologies, robotics and e-technologies (AHMC 2004, AHWAC and AMWAC forthcoming). The impact of innovations in these areas on workforce requirements remains difficult to assess. Hence, any new approaches to workforce planning will need to be sufficiently flexible to allow for the unpredictable. What is well known and understood is that most advances in medical technology have resulted in increased complexity in service delivery, increased specialisation and potential for fragmentation in service delivery; with effects on demand, practice and productivity. As a consequence of these pressures, new interdisciplinary models of service delivery have evolved to facilitate collaborative decision-making among an increasingly specialised workforce and new roles have emerged (eg program coordinators, case managers) to enable continuity of care for patients.

Increasing workforce diversity

Health and community services are the fourth largest employing industry in Australia. Between 1996 and 2001, the total number of people employed in health and community services industries increased by 10.6% (or 76,562 persons), from 721,639 to 798,201. The number of people employed in health occupations, during this period, increased by 11.4%, from 404,582 to 450,792. For the key health occupations the main increases were medical

practitioners (an increase of 12.6%), medical imaging workers (25%), dentists (11%), registered nurses (5.8%), pharmacists (13%) and nursing assistants and patient carers (18.8%) and allied health workers (27.4%). (AIHW and ABS 2003).

The diversity of the workforce is highlighted by the fact that the ABS Classification of Health Occupation contains 76 different health occupations (AIHW and ABS 2003) of which approximately 24 are registrable under the auspices of a government agency or delegated professional body (Palmer and Short 2000). Qualification levels vary markedly within this workforce, ranging from people with no formal qualifications to highly qualified specialists. Increasing demand for home and community-based services and residential aged care services has seen an increase in the use of health workers with no formal qualifications.

Increasing costs

Responsibilities for the funding and provision of health services in Australia are complex, involving different levels of government, and the public and the for-profit and not-for-profit non-government sectors. In 1999-2000, government funding accounted for 71.2% of total health expenditure, while the remaining 28.8% was provided by the non-government sector. Between 1960-61 and 2001-02, total health expenditure grew from $692 million to $66,582 million. This represented 4.2% of Gross Domestic Product in 1960-61 and 9.3% in 2001-02 and an increase in per person expenditure from $65 to $3,397. The Australian government has the major responsibility for the funding of medical services, pharmaceutical services and aged care services, while State and Territory governments are largely responsible for the public provision of health services, and for public health. For the State/Territory governments, hospitals are the largest area of health expenditure. It is well known that governments and those dependent on government funding are under pressure to achieve balanced budgets and value for their use of the taxpayers dollar. As the population increases and ages and technology advances, demand for, and the cost of, health services continues to increase (AIHW 2004 and AIHW 2002).

The AIHW estimates that 65% of total health services expenditure in Australia can be attributed to the costs of labour (ie wages and salaries and employer contributions to workers' compensation and superannuation (AIHW 2000). Hence, of the $66,582 million spent on health services in Australia in 2001-02, around $43,278 million can be attributed to the health workforce. It follows that changes in occupational categories, educational requirements, salaries, and any growth in the health workforce, particularly the professionally qualified workforce, will have a major impact on overall health expenditure.

Search for cost-effective ways of using the health workforce

Given economic pressures, increasing specialisation, changing modes of service delivery and workforce shortages it is not surprising that there is strong support for an approach to workforce planning that facilitates the development of more consumer-focused and cost-effective ways of using the health workforce. Underpinning these sentiments is the perception that current approaches to workforce utilisation, particularly the utilisation of qualified professionals, are in some cases inappropriate and unsustainable.

In Australia experimentation with new approaches to workforce design is occurring based on definition of required competencies and skill development. These developments are being used at the local level, primarily to solve recruitment or professional shortage issues. These changes represent local responses to changing models of care and needs, which have not, as yet, been integrated into national or jurisdictional level workforce planning activities. In the main these initiatives include a transfer of some of the traditional functions once undertaken by one professional group to another, possibly less highly qualified group (AMWAC 2003). Australian examples of these developments include (Victorian Department of Human Services 2000):

- Emergence of the nurse practitioner role, with nurses receiving additional competency training to undertake roles normally performed by doctors, such as ordering tests and prescribing pharmaceuticals.
- Expansion of the scope of practice for division 2 or enrolled nurses to authorise administration of prescribed medications, previously the domain of division 1 or registered nurses.
- Increasing use of personal care workers, particularly in aged care, to perform functions that require lower skill levels than state enrolled or registered nurses.
- Substitution of nurses specialising in renal dialysis with renal dialysis technicians who have more specific competencies in delivering renal dialysis (and not the general diagnosis and treatment skills of the general nurse).
- Preference in some operating theatres for anaesthetic technicians in place of theatre nurses, again with more specific competencies.
- Authorising psychologists prescribing in rural settings where psychiatrists are not resident.
- Expanded role of ambulance officers to prescribe limited drugs of addiction in some circumstances.

Given the above initiatives, it is little wonder that the traditional profession-based or occupation-based approach to workforce planning is being challenged and new workforce planning methods are being called for; approaches that facilitate the integration of new approaches to workforce design and workforce planning. A models of care approach to workforce planning is thought to have such potential.

WHAT DO WE MEAN BY A MODELS OF CARE APPROACH TO WORKFORCE PLANNING?

Defining a models of care approach to workforce planning

The 2002 review of AMWAC suggested that a models of care approach to workforce planning involved taking a particular care group eg. mental health, diabetes, asthma, cardiovascular disease and identifying a best practice model(s) of care designed to meet the needs (not demands) of a particular population; the skills and capabilities required to provide that service is determined, and the required workforce supply is then determined (AHMAC 2002). Hence, the planning actions associated with this definition are:

- Identification and description of the present care group assumed to be multi-disciplinary/occupational.

- Identification of a best practice model(s) of care designed to meet the needs of a particular population. Two issues are important here, viz., definition of an acceptable best practice model of care and the emphasis on population need. Defining a best practice model of care is no easy task and this issue is discussed further below. The emphasis on population need is important because it provides a basis for estimating future population requirements given that there are recognised measures available to planners for the measurement of 'need'. Furthermore, the assumptions underpinning this approach to assessing population requirements are well understood.
- Definition of the skills and capabilities required to provide the model of service. The operational implications of this requirement could be interpreted in several ways. For example, it could assume that the present mix of staff is appropriate and the job of planners becomes defining the skills and capabilities currently required of staff in their present roles. It is more likely that the intention was for workforce planners to undertake a grass-roots analysis of the functions to be performed and the skills and capabilities associated with each of these functions and to then explore who is best able to perform these skills etc. If this is the intention, then this activity would involve workforce planners working in close collaboration with service providers in defining present models of service delivery and expected changes in service delivery followed by an analysis of tasks, functions and skill requirements. If this is the preferred option then it has considerable resource and time implications. Furthermore, it is likely to influence the previously defined model of care.
- The workforce supply required. Here the measures of population need would provide the basis for estimating workforce supply growth requirements in the future. However, the multi-disciplinary/occupational mix of this workforce will depend on the outcomes of the skills and capabilities analysis. The recommendations arising from this analysis are likely to be much broader than recommending increases to existing training programs and/or increases in the number of migrants with particular skills/qualifications entering the country.

More recently, AMWAC defined a models of care approach as one that 'determines preferred patient outcomes, then uses these to define optimal models of care, and determines the appropriate workforce supply and mix accordingly' (AMWAC 2003). This definition implies evaluation of existing models of care based on achievement of preferred patient outcomes in order to produce an 'optimal model of care'. Hence, it appears to assume change in existing models of care. It also proposes that the evaluation of existing models of care precede actions to determine the appropriate workforce supply and mix.

The AHWOC survey of State/Territory health planning jurisdictions (2003) defined a 'models of care' approach to workforce planning broadly, viz., as being 'multi-profession, based on the model of care in a service (eg mental health)'. They found that among jurisdictions there was considerable variability in how a 'models of care' approach was defined and expressed. Some related it to the statewide structuring of a workforce (eg 'spoke and hub'), others perceived it to mean identifying the health workforce required to provide a particular health program (eg oral health program, mental health program) or stream of services in a particular setting (eg acute care, emergency care). Others perceived it to relate to a particular health

problem (eg people with cancer) and the multidisciplinary workforce required to provide the full range of services (eg oncology services) based on recognised or agreed-upon (through extensive consultation and consensus-building) optimal models of service delivery. Still others related it to a particular segment of the population, such as frail elderly people, or children (0-15 years of age).

Queensland Health has defined a model of care as 'a multifaceted concept, which broadly defines the way health services are delivered. It can therefore be applied to health services delivered in a unit, division or whole of District' (Queensland Health 1999). Examples of models of care currently in use were cited as: family centred care; integrated mental health service; shared care programs; case management; pre-admission clinics and preadmission planning processes; transitional care; designated stroke unit/services; and team nursing care.

Issues requiring clarification

Models of care or models of service

The findings of the jurisdictional survey suggested that among State/Territory jurisdictions the use of the terms 'models of care' and 'models of service' is interchangeable. Some stakeholders warned that a 'models of care' approach to workforce planning which focuses on a particular health problem could contribute further to the fragmentation of service delivery to patients with multiple health problems, such as diabetes mellitus and ischaemic heart disease or cancer and chronic obstructive pulmonary disease. To overcome problems of vertical integration, for five chronic diseases, the Northern Territory Department of Health is exploring an integrated approach to service delivery based on a three-point framework, viz., 'Primary prevention', 'Early detection' and 'Management' (Weeramanthri et al., 2003).

Level of focus and purpose

What is the level of focus of a models of care approach to workforce planning; national, state, region/district, division or unit? Is the purpose to bring about change in existing models of care or models of service delivery and if so who is best placed to drive these changes?

Best practice or quality improvement focused

The use of the term 'best practice' is perceived by some stakeholders to be problematic. First because in many situations there is a lack of information available to support any particular 'best practice' model of health care. Secondly, among health professionals from similar and separate disciplines there may be more than one definition of a 'best practice' model of care, hence, the problem of whose definition to accept for planning purposes or the need to engage in a timely and costly process of consensus-building. Thirdly, a defined 'best practice' model of care that works in one geographic location may not work in another (eg rural and remote regional centres versus inner-metropolitan locations). Fourthly, a 'best practice' model of care may vary across time. This becomes problematic for workforce planning purposes when projections can span 10 to 20 years.

Patient or consumer

The use of the word 'patient' is also problematic for some stakeholders because of its association with acute care services and workforces. The preferred terminology suggested is 'consumer'.

Single discipline/occupation focus or multi-discipline/occupation focus

A models of care approach to workforce planning is not necessarily multi-disciplinary/occupational. For example, some stakeholders interpreted it as being capable of applying to a defined 'model of care' for a single occupational group (eg nurses).

PLANNING OUTCOMES

Among key stakeholders, five outcomes were expected from use of a models of care approach to workforce planning (AHWOC 2003). These outcomes are examined below with reference to the way in which State/Territory jurisdictions have applied them. Not surprisingly, there is some overlap among these expected outcomes.

1. Workforce plans, which are consumer-focussed

   A models of care approach to workforce planning provides an opportunity for the focus to move from provider to the consumer if the approach is to first define 'preferred consumer outcomes from which the health workforce supply and mix are determined'.

   This outcome may also be achieved if the approach was 'calculation of future workforce supply using an input/output analysis approach while future requirements are calculated from a range of benchmarks relating to treatments required based on population trends.' For this approach to be consumer-focused would depend on how 'treatments required' was defined. For example it would not necessarily be consumer-focussed if the benchmarks were defined by jurisdictions without consumer involvement in the benchmark determination process.

2. Workforce plans that are aligned with service delivery plans

   Workforce plans that are based on first defining a preferred model of care have the potential to be more closely aligned with service delivery plans. For this to happen, workforce planners would need to work with service providers to explore changes in service delivery and the definition of preferred models of care for the future.

   Here it is essential to gain a shared understanding of what is meant by a 'model of care'. Some service providers define a model of care according to the staff mix required to deliver services of acceptable quality. Hence, the focus is on the 'care group' rather than the 'consumer'. For example, in some sectors, it is anticipated that the present model of care (as defined by mix of staff) is unsustainable and a new model of care is emerging. These new models of care are being driven by increasing consumer demand without a corresponding increase in resources, present and anticipated shortages of professional staff, and search for a more cost-effective model of care; one which involves transferring some of the tasks performed by qualified professionals to non-professionals. Importantly,

this approach requires examining the educational implications of such a transfer of tasks and skills.

3. Planning recommendations for a multi-disciplinary and/or multi-occupational segment of the workforce

   One State/Territory jurisdiction perceived that a models of care approach 'works primarily with multi-disciplinary teams using a clinical management approach.' Others maintained that this approach to workforce planning enables 'consideration of multiple occupations simultaneously' and 'taking account of the possible or likely impact of change in one occupational group on other related groups'.

   If multi-disciplinary planning is the primary reason for using a models of care approach to workforce planning, then the 'model of care' is likely to be defined by mix of staff rather than by preferred patient outcomes. If this is the case then this may not be a models of care approach but just a profession orientated approach applied across multiple professions. However, this is not necessarily so. Definition of staff mix could be preceded by definition of a model of care based on achieving preferred consumer outcomes. This approach is inferred from the statement that it 'works primarily with multi-disciplinary teams using a clinical management approach'; and this is an important definitional and process distinction. This clinical management approach is most likely to refer to a particular group of consumers (eg people requiring oncology services, people with mental illness). The important expectation here is the development of workforce plans that are more holistic (ie multi-disciplinary or multi-occupational) than would be the case if the focus was uni-disciplinary or uni-occupational.

4. Realistic and sustainable ways to address multiple workforce shortages simultaneously

   As inferred above under item 2 'Workforce plans that are aligned with service delivery plans', a models of care approach to workforce planning is perceived as having the capacity to address present and anticipated future multi-disciplinary or cross-profession or cross-occupation issues or multiple shortages simultaneously. As in Item 2, achievement of this expectation requires close cooperation between service providers and workforce planners in defining a model of care based on achieving preferred patient outcomes and a realistic and sustainable staff mix. Outcome strategies arising from such a planning exercise would be expected to be innovative, both supply-side and demand-side.

5. Control of escalating workforce costs

   If the focus of a models of care approach to workforce planning is to control escalating workforce costs, then planners and service providers would need to work together to define a preferred model of care and the most cost-effective mix of staff to achieve that model of care. The focus of this approach is closely aligned with Items 2 and 4 above.

In summary, most stakeholders agree that a models of care approach to health workforce planning:

- Is concerned with providing services of acceptable or optimal quality to the population of people requiring those services;
- Is multi-disciplinary/occupational, encompassing the full range of care givers associated with the provision of services to the respective population;
- Begins with a description of present models of care associated with the provision of services to the respective population and the present mix of staff required to provide these services;
- Asks 'Where are we now?' and 'Where do we want to go?' This should include an assessment of service delivery targets, how these changes may impact on present models of care and the mix of staff;
- Using future population need estimates and service delivery targets, models workforce supply scenarios for each of the respective disciplines/occupations based on the present way of doing business (eg staff mix) and then examines whether the present approach to providing and staffing services is sustainable;
- Depending on the outcome of the projection modelling, explores strategies for ensuring a sustainable workforce supply into the future. This may include an extensive analysis of the functions and skills required to provide a desired model of care and the best people to provide those services in a cost-effective manner. This is likely to be an iterative 'change management' process with the characteristics of the preferred model of care and workforce mix influenced as more information becomes available;
- Links health workforce planning strategies for the future with education and training providers, but explores other strategic options also;
- As far as possible, employs a quality improvement approach to workforce planning and change management.
- Is inclusive, ie includes stakeholders in the health workforce planning process.

A POTENTIAL MODELS OF CARE APPROACH TO WORKFORCE PLANNING

This section outlines a potential models of care approach to workforce planning that is designed to be sufficiently flexible to cater for important discipline based differences as well as differences in stakeholder outcome expectations.

PHASE 1: PLANNING TO PLAN

Select Multi-Disciplinary/Occupational Workforce

1. Selection of health issue and multi-disciplinary/occupational workforce care group

   A particular health issue or workforce care group needs to be identified as a high priority area for workforce planning (eg. mental health services, emergency services, oncology

services) and the multi-disciplinary/occupational group of care-givers needs to be defined.

Plan the project

2. Establish reference group/working party

   Establish a reference group or working party of people with relevant expertise to advise the workforce planners undertaking the project and identify others with whom it may be useful to consult.

3. Define purpose and expected outcomes

   Define the purpose and expected outcomes of using a models of care approach to workforce planning. The outcomes of this activity will largely determine the scope and focus of the planning project.

   As previously indicated, among key decision-makers the expected outcomes of using a models of care approach to workforce planning may vary. Therefore, it is essential that the expected outcomes of the project are clearly defined at the outset because the questions to be addressed by workforce planners will vary accordingly. It could be that key stakeholders might expect workforce planners to achieve all the following outcomes and the feasibility of such a large undertaking may need to be examined.

   To produce workforce plans that are consumer-focussed

   - 'What is the present optimal clinical model of care to achieve the defined preferred consumer outcomes?'
   - 'What is presently considered to be the appropriate workforce supply and mix required to deliver this model of care?'
   - 'How does the present optimal clinical model of care and workforce supply and mix vary by location?'
   - With a view to the future (ie 5-10 years), what changes in service delivery are expected and desirable that will influence the clinical model of care and the workforce supply and mix?
   - What is the optimal clinical model of care and workforce supply and mix for the future (ie 5-10 years)?
   - How will this preferred future clinical model of care and workforce supply and mix vary by location to ensure equity of access for consumers?'

   To produce workforce plans that are aligned with service delivery plans

   - 'What is the present model of care as defined by service providers'. It could be that service providers define an optimal model of care according to staff mix rather than consumer preferred outcomes. If this is the case planners will need to decide whether they will require service providers to first define their optimal clinical model of care.
   - 'What changes in service delivery are desirable and expected in the next 5-10 years?'
   - 'With these changes in mind, what is the optimal clinical model of care and workforce supply and mix for the future (ie 5-10 years)?'

- How will this preferred future clinical model of care and workforce supply and mix vary by location to ensure equity of access for consumers?'

To produce workforce plans for a multi-disciplinary and/or multi-occupational segment of the workforce

- 'What is the present multi-disciplinary (possibly multi-occupational) workforce supply and mix required to provide the defined optimal model of clinical care?'
- 'What changes are expected and desirable in the next 5-10 years in the workforce supply and mix required to provide the preferred model of clinical care?'
- How will this preferred workforce supply and mix and clinical model of care vary by location to ensure equity of access for consumers?'

To produce realistic and sustainable ways to address multiple workforce shortages simultaneously

- 'What is the present multi-disciplinary/multi-occupational workforce supply and mix required to provide the defined optimal model of clinical care?'
- 'Based on this definition of workforce supply and mix, what workforce shortages presently exist and are expected to continue or worsen in the future?'
- 'Is there a more realistic and sustainable way of organising staff to provide the defined optimal model of clinical care?'
- How will this preferred workforce supply and mix and clinical model of care vary by location to ensure equity of access for consumers?

To control workforce costs

- With respect to the selected health problem or issue, what is the most cost-effective way that services to consumers could be provided?
- 'What is the present multi-disciplinary/multi-occupational workforce supply and mix required to provide the defined optimal model of clinical care to consumers?'
- 'What changes in multi-disciplinary/multi-occupational workforce supply and mix are required to control the costs associated with the defined optimal model of clinical care?

PHASE 2: ASSESSMENT OF PRESENT MODELS OF CARE

Descriptive analysis

1. Describe present model/s of care/service delivery and determine whether an 'optimal model of care' that is acceptable to all key stakeholders exists

   It could be that among key stakeholders there is no agreement as to what constitutes an 'optimal clinical model(s) of care'. This raises the question as to whether the workforce planning project should be delayed until a consensus is reached about this issue or whether to progress the project by undertaking workforce supply and requirements modelling based on existing models of care, including staff mix (or 'ways of doing business')? In either case, this modelling should seek to address the question, 'Is the present way of doing business sustainable?'

Queensland Health (2000) suggests the use of the following elements to describe a model of care. The purpose of collecting this information is not only to provide a good picture of the present model of service delivery but also to gain insight into the quality and cost of the services being delivered and any problems associated with the model:

- Values and principles
- Current structure and roles (ie Who does what and how do they relate to each other?)
- Care delivery processes
- Referral patterns (policies and processes, consumer flows, flexibility)
- Patient outcomes
- Outside comments and perceptions (eg community perceptions; other stakeholder perceptions)
- Staffing profile (eg staff and skill mix)
- Communication structures
- Cost of service delivery

2. Describe population of interest

   This description will vary depending on the scope of the project (eg national, state, regional). Population characteristics might include:

   - Number
   - Demographics
   - Socioeconomic profile
   - Health needs profile using accepted epidemiological and planning measures, by geographic location (this may require mapping)
   - Service utilisation
   - Service availability by geographic location (this may require mapping)

3. Consult with service providers

   Consult with service providers in order to describe 'Where are we now? And 'Where do we want to go'. Issues to be described include:

   'Where are we now?'

   - present models of care associated with the provision of services to the respective population;
   - the present mix of staff required to provide these services;
   - present service delivery targets;

   'Where do we want to go?'

   - proposed changes in service delivery models;
   - proposed changes in mix of staff;
   - future service delivery targets.

4. Describe present multi-disciplinary/occupational workforce

   For each care group associated with the model of care, as far as possible describe:

   Present workforce

   - Number and characteristics (age, sex, qualifications, visa status, possibly ethnic background)

- Workforce participation (full-time/part-time; hours worked, on average, per week)
- Geographic distribution (State/Territory; urban/rural)
- Health care service distribution (ie type of service)
- Type of work performed (functions) and competencies required

Workforce additions

- Sources of recruitment (eg training institutions, re-entry, migration), including years of training required etc
- Number and characteristics of potential new recruits (age, sex, qualifications, visa status, possibly ethnic background, possibly career expectations)
- Recruitment trends and policies likely to influence sources of recruitment

Workforce attrition

- Retirements, including expected age of retirement
- Drop-out from the workforce, trends and reasons for drop-out
- Deaths
- Migration

Evaluative analysis

1. Evaluate the adequacy of the present model of care

   Using appropriate indicators assess the adequacy of the present model of care. Assessment of the adequacy of the model of care could be informed by several indicators, such as:

   - Consumer outcomes
   - Community perceptions; key stakeholder perceptions
   - Cost-effectiveness

2. Evaluate the adequacy of the multi-disciplinary/occupational workforce associated with the present model of care

   Assessment of workforce adequacy might draw on a variety of requirement-side and supply-side indicators depending on the availability of data. For example:

   Requirement-side

   - Population need indicators by geographic location (eg unfilled positions or funded vacancies; consumer access; practitioner/population benchmarks; consumer and carer assessments; consumer waiting times; quality of care indicators, such as, adverse events)

   Supply-side

   - Excessive hours of work
   - Workforce attrition
   - Views of the respective workforce as to the adequacy of supply
   - Views of providing agencies as to the adequacy of present supply

Predictive analysis

1. Estimate future workforce requirements based on the present way of 'doing business'

   Estimate future workforce requirement scenarios using appropriate indicators of need for the target population and growth estimates based on jurisdictional service delivery targets.

2. Model workforce supply and requirement scenarios based on the present way of doing business and future workforce requirement estimates

   Model workforce supply and requirement scenarios for the next 10-15 years for each of the respective care groups based on the present way of doing business (eg models of care and workforce supply and use) and estimated 'need' growth rates and taking into account any existing shortages/excesses in supply.

Evaluative Analysis

3. Evaluate any disparity (eg gap) between projected supply and demand and the sustainability of the present way of doing business

   Using projection modelling and previously defined supply and requirements estimates, examine any future disparity between supply and demand based on the present model of care (ie approach to providing and staffing services) and evaluate the sustainability of this approach over the next 10-15 years.

Recommend Strategies

1. Recommend strategies for ensuring a sustainable workforce supply into the future

   Depending on the outcome of the projection modelling and assessment of sustainability, recommend strategies for ensuring a sustainable workforce supply into the future. If done nationally, these recommendations should be developed in consultation with State/Territory jurisdictions. These recommendations may include increases/decreases in enrolments in relevant education and training programs, increases in the number of re-entry programs, workforce retention strategies, and changes in review of the present approach to delivering services (ie models of care and workforce mix etc) with a view to changing to a more cost-effective and sustainable approach.

   Strategies to bring about change in existing models of care extend well beyond the present boundaries of national level workforce planners into the realm of jurisdictional organisational change. Hence, it is likely that they would involve jurisdictional workforce planners working with service providers and clinicians in a grass-roots analysis of present models of care and approaches to workforce recruitment, retention and deployment.

2. Monitor progress toward achievement of recommended strategies

   Ongoing monitoring of implementation and evolving workforce issues.

PHASE 3: CHANGING MODELS OF CARE

As indicated above, Phase 3 of a models of care approach to workforce planning could be about brining about change in prevailing models of care that have been found to be unsustainable. Such a proposal implies the implementation of significant organisational change; an activity that requires careful and skilful management at the local level.

Importantly, strategies to bring about change in models of care should be undertaken in a manner that does not compromise the quality and safety of the services provided to patients. Ideally, these changes would be based on achieving certain specified criteria and evaluated

accordingly. For example, such criteria might include improvements in the quality and safety of services provided to consumers.

The implementation of strategies to bring about change in models of care will no doubt have significant implications for education and training providers.

CONCLUSIONS

Definitions of a 'models of care' approach to workforce planning vary among Australian stakeholders. It would appear that a models of care approach to workforce planning may mean different things to different people. Hence, it may be more useful to define it as a multifaceted concept that encompasses workforce planning that is multi-disciplinary/occupational, consumer-centred, more closely aligned with service delivery planning, facilitates exploration of new cost-effective methods of delivering services ('models of care'), and produces workforce plans accordingly.

A models of care approach to workforce planning would appear to hold several opportunities and challenges for workforce policy makers and planners, including:

Opportunities

- the development of workforce plans that are potentially more:
  - consumer-focused;
  - closely aligned with service delivery plans;
  - multi-disciplinary/occupational;
  - holistic in their approach to addressing workforce challenges; and
  - potentially cost-effective and sustainable.

- extension of the knowledge and skill base of workforce planners to include strategic planning and change management tools, such as:
  - evidence based medicine;
  - quality improvement;
  - risk management;
  - competency definition, assessment and development;
  - workforce re-engineering; and
  - change management.

Challenges

- becoming 'bogged-down' with information overload and the complexity of the exercise with implications for the development of reports that key people will read and use*;*
- limiting health workforce planning activities to those health issues for which there is a reasonable body of knowledge about what constitutes a model of care/service delivery that will achieve optimal patient outcomes. For example, the evidence-based medicine body of knowledge is limited largely to health problems that lend themselves to randomised controlled trials;

- entering new domains/territory, such as education, or spending time working with the traditional holders of these domains in order to define and assess essential competencies etc. This exercise would require careful managing and has resource implications;
- workforce re-design, which can be expected to have greater prominence as a strategy but may not be readily embraced by health professionals and their industrial bodies. Hence, if undertaken, this process needs to be well managed.

A models of care approach to health workforce planning would appear to have three major phases and a number of essential processes. Phase 1 involves 'Planning to plan', while Phase 2 involves describing and evaluating the sustainability of present models of care and associated workforce supply and mix arrangements. Depending on the outcome of Phase 2, Phase 3 is about bringing about change in prevailing models of care and associated workforce supply and mix arrangements in situations where this is deemed necessary.

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