

# Allied, scientific and complementary health professionals: a new model for Australian allied health

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## Abstract

There is no standard or agreed definition of “allied health” nationally or internationally. This paper reviews existing definitions of allied health, and considers aspects of allied health services and service delivery in order to produce a new model of allied health that will be flexible in a changing health service delivery workforce. We propose a comprehensive model of allied, scientific and complementary (ASC) health professionals. This model recognises tasks, training, organisation, health sectors and professional regulation. It incorporates traditional and new services which are congruent with allied health foci, allegiances, responsibilities and directions. Use of this model will allow individual organisations to describe their ASC health workforce, and plan for recruitment, staff training and remuneration.

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THERE IS NO STANDARD or agreed definition of “allied health” in the national or international literature. The most common approach has been

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## What is known about the topic?

The health reform agenda in Australia requires a clear approach to grouping “allied health” services in terms of what they do, who they do it to, why they do it, and how they integrate with other health services, so that appropriate workforce decisions can be made for the future.

## What does this paper add?

Following a review of existing definitions of allied health, the authors propose model of allied, scientific and complementary (ASC) health professionals which reflects the current and future face of Australian allied health professions.

## What are the implications for practitioners?

Practitioners and policy makers should consider the use of this allied health framework that promotes the flexible inclusion of disciplines by task, rather than by discipline name.

to group allied health professions, by name, into a loose collective, which is defined only by exclusion (not being medical or nursing/midwifery). There has been ongoing debate about what allied health services do, who their customers are, how they measure their effectiveness, and how they integrate under one allied health collective banner. Boyce<sup>1</sup> identified relationships between allied health professions as being the core link which sets them apart from medicine and nursing. She noted that this “alliance” reflects not only inter-discipline relationships in terms of customers and activities, but also relationships with the communities they serve. This model of integrated service intent and delivery would appear to be an appropriate framework from which to mount discussions about new nomenclature.

Internationally, definitional approaches range from simply listing health disciplines that are not medicine or nursing, to collating and classifying different service types. The listing approach

reflects an historical perspective, such as the National Health Service (NHS) Scotland report<sup>2</sup> in 2002, which listed a range of professions under the allied health umbrella: “arts therapists, podiatrists, dietitians, occupational therapists, orthoptists, physiotherapists, prosthetists and orthotists, diagnostic radiographers, therapeutic radiographers, speech and language therapists”. (pp. 14, 15). More recently, work-task-based classifications have been used in the United States and the United Kingdom to define allied health. The United States Association of Schools of Allied Health Professionals (ASAHP)<sup>3</sup> defined allied health as, “... professionals [being] involved with the delivery of health or related services pertaining to the identification, evaluation and prevention of diseases and disorders; dietary and nutrition services; rehabilitation and health systems management, among others ...”. The NHS Scotland<sup>2</sup> classified allied health more broadly by using classifications such as “scientific, technical and therapy workers” (p. 1) and took a more holistic view of the allied health role in health care, stating that,

allied health professionals are critical to people's ongoing assessment, treatment and rehabilitation throughout their illness episodes. They support people of all ages in their recovery, helping them to return to work and to participate in sport or education. They enable children and adults to make the most of their skills and abilities and to develop and maintain healthy lifestyles. And they provide specialist diagnostic assessment and treatment services.<sup>2</sup> (p. 7)

In Australia, two recent reviews have been undertaken that have raised the importance of understanding why allied health services are linked, and how this link can be explored in a manner which supports industry growth and broad recognition by other health providers, and consumers. The first review was undertaken in 2004 by the national group Services for Australian Rural and Remote Allied Health (SARRAH). A wide range of Australian stakeholders was surveyed to classify allied health in the Australian context. SARRAH framed the survey by defining

allied health professionals as “tertiary qualified health professionals who apply their skills to restore optimal physical, sensory, psychological, cognitive and social function. They are aligned to each other and their clients.”<sup>4</sup> (p. 4). The survey identified 49 occupations which at least one stakeholder considered to be allied health. The criteria used by many stakeholders for identifying allied health services are expressed by the following statement:

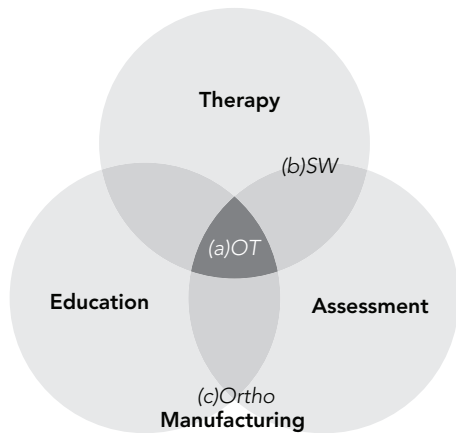
[Professions] which are involved in health care, other than the disciplines of medicine, nursing and health administration; for which tertiary qualifications exist and which are essential for professional registration or admission to a relevant professional body and whose professional activities focus on client diagnosis, treatment and/or primary health care.<sup>4</sup> (p. 11)

From this list, 14 occupations were highlighted as core “clinical and diagnostic” allied health professions: audiology, clinical psychology, dietetics, hospital pharmacy, occupational therapy, optometry, orthoptics, orthotics and prosthetics, physiotherapy, podiatry, radiography, social work and speech pathology.<sup>4</sup> This listing was subsequently proposed as the SARRAH Health Professional Workforce. These professions were grouped because they were “tertiary qualified health professionals who apply their skills and knowledge to restore and maintain optimal physical, sensory, psychological, cognitive and social function.” They are aligned to each other and their clients.<sup>4</sup> (p. 25)

In the second project in 2006, the Australian Health Workforce Advisory Committee (AHWAC)<sup>5</sup> reviewed all available national and international definitions of allied health and reported that:

... there is no clear and consistent agreement on what comprises the allied health workforce at either the stakeholder, jurisdictional or national level ... Attempts to define the allied health workforce have primarily been approached in two ways; by identifying criteria that define the allied health workforce, and

### I A task model for the allied health professions



by identifying those professions considered part of the allied health workforce.<sup>5</sup> (p. 14)

Neither of these reports resolves the dilemma in Australia related to considering allied health services in terms of workforce tracking, collective action for wage, working conditions, registration parity and/or educational opportunities and standards. That only 14 of 49 allied health disciplines identified from the SARRAH survey were subsequently included in its workforce definition raises the questions:

- Is there another more relevant term for the professions (other than medical and nursing/midwifery) that provide clinical care and services to customers or patients in health systems?
- How do the other 35 occupations participate in reform and change within a health system (for instance how are they represented at a decision-making level)?
- Where do emerging new professions or clinical services, which may not be registered and/or tertiary trained, sit in terms of allied health workforce recognition?

Grimmer and Kumar<sup>6</sup> considered evidence-based practice in terms of the clinical questions that allied health providers ask. Clinical questions often relate to the most commonly-performed

clinical tasks. This work identified a range of tasks undertaken by core allied health providers which required different types of evidence to inform practice. These tasks included assessment, therapy (treatment), education, counselling and manufacture. Not all allied health practitioners undertake all these tasks, and some tasks inform others. This task-based discussion highlighted the multifaceted nature of much allied health practice, and validated the difficulties reported around the world when determining definitions of allied health that addressed all operational requirements.

This article reflects the national and international definitional literature, and explores the Grimmer and Kumar model, in order to propose a rationale for an alternative grouping of health professions. This approach could assist the formation of a health professional collective, which is not medical or nursing, whose activities are congruent with the health care reform agenda in Australia, and which can be sufficiently flexible to support the advancement of allied health in a changing health service delivery world.

### Rationale

There appear to be seven key issues for consideration in the environment of Australian health reform to assist in developing a definition of “allied health” services that is sufficiently flexible to take account of current and future definitional, educational, regulatory and organisational change.

### What does allied health do?

Grimmer and Kumar<sup>6</sup> found that all allied health professions have at least one core task upon which their practice focuses (eg, social worker: assessment; physiotherapist: therapy; psychologist: counselling; prosthetist: manufacturing). Expanding this model, we identified that each profession usually has secondary and tertiary tasks on which they focus at certain times during their working week. These secondary and tertiary tasks may be the core primary task of another allied health discipline, and thus definition by

discipline needs to reflect health professional capacity to mix and match what they do to suit the presenting patient problem within the service delivery environment. The core tasks, based on the Grimmer and Kumar model,<sup>6</sup> are outlined in Box 1.

In this model, we demonstrate how professional activity can range across and within these tasks, and how primary tasks can intersect with secondary and tertiary tasks. Some professions such as physiotherapists and occupational therapists (Box 1, a) may undertake a range of tasks regularly while others such as social work (Box 1, b) may undertake a selection of tasks (say, assessment and therapy) while others, such as orthotists (Box 1, c) may primarily manufacture and rarely undertake other tasks.

These tasks, all of which are directly or indirectly related to patient care, are underpinned by the manner in which they are provided, for instance:

- To whom interventions are provided (for instance to groups, to individuals, to families, or to communities);
- Where the interventions take place (for instance in acute care setting, ambulatory settings or primary care settings);
- Why the core task is undertaken, reflecting the primary function of the intervention (eg, interventions based on the assessment itself, or on results of the assessment, or on review to change care plans, or interventions based on education).

These three core questions alone highlight the complexity of service provision across and within the allied health professions. This validates the historical debates about where the allied health professions “belong”, and why they have been grouped together.

Some non-traditional and emerging health disciplines were highlighted in the SARRAH and AHWAC reviews, for instance Aboriginal health workers, exercise physiologists, mental health workers, music therapists and osteopaths. Moreover, there is a groundswell of support at consumer and health insurance level for many complementary therapies to be recognised in

mainstream health care (such as acupuncture, remedial massage, chiropractics, osteopathy, aroma therapy and naturopathy).<sup>7</sup> Public perception is supported by an increasing body of scientific literature which suggests that these services, in some settings, are at least as effective as many established health practices, are more acceptable to consumers, and have comparable cost benefits. Examples of this increasing body of evidence are found in the Cochrane library, which cites over 50 systematic reviews of the use of acupuncture for a range of health conditions published in the past decade.<sup>8</sup>

### **Allied health education**

The current Australian scenario of education for allied health is disjointed, and has no clear direction. Thus, determination of an agreed allied health collective may assist in cross-sector discussions regarding allied health training and employment. For instance, traditional allied health professionals (physiotherapy, psychology, occupational therapy, podiatry, social work, speech pathology, clinical nutrition, exercise physiology) are trained in universities, emerging with well-recognised undergraduate degrees which largely guarantee employment anywhere in Australia and in most countries overseas. In the last decade, there has been an increasing move nationally to produce undergraduates with generic health degrees, and then enrol them in postgraduate training in an allied health speciality, with the student emerging with a coursework (clinical) Master degree. This model was pioneered in psychology, with graduates not able to practise clinically until they had obtained a Master degree. The graduation of young people with generic health degrees raises the issue of employment with, and without, specialist training. Where will these graduates be employable if they do not proceed to specialisation? Will they become an emerging health profession in their own right, the health worker, or therapy assistant? Should graduates with a clinical Master qualification be paid more than clinicians with an undergraduate speciality degree?

New courses are continually added to the Australian university sector in recognition of the defensible scientific basis of emerging or non-mainstream allied health professions, such as orthotics and prosthetics, naturopathy, acupuncture, chiropractics and osteopathy, paramedical care and counselling. Other disciplines which could be considered to fit in an allied health model have traditionally been trained in non-university courses, provided by public and private institutions in the vocational training sector. Such disciplines include music therapy, remedial massage, aroma therapy, environmental health officers, Aboriginal health workers, mental health workers or personal carers. New disciplines or roles are also emerging that are attracting workers with, and without, recognised health training, but which should be considered within the allied health field. One such role is the lifestyle coach, whose effective involvement in assisting individuals to manage their chronic disease (such as diabetes, or respiratory disease) has been promoted around Australia in primary health care environments. These workers have been shown to come from traditional health backgrounds, as well as non-health community service roles such as translators, gym instructors or telephone helpline workers. Other emerging roles, such as diabetes educators, offer an alternative direction for university-trained personnel such as nurses and doctors, but can also attract specifically trained health workers coming from the vocational sector, or university undergraduates with generic health degrees.

The different approaches to allied health education recognise levels of allied health workers who need to be considered when determining wage structures and role definitions, including university undergraduates who are currently training, university graduates with generic degrees, university clinical Master graduates, graduates with higher research degrees and vocational sector graduates.

### ***Professional registration and regulation***

There is no standard approach for professional recognition, registration or regulation in Aus-

tralia. Registration for many mainstream allied health therapies is by government legislation. Currently, each Australian state manages its registration boards based on state legislation, which in some instances conflicts between states. There is a proposal for a national registration board within the next 12 months, for those allied health disciplines which have registration boards in every state and territory. Given the variability between states and territories in registration of health professions however, national registration will only address perhaps six health disciplines. There is also no legislated registration for many allied health disciplines, including some well-accepted disciplines such as clinical nutrition or social work. Within such an unregulated service delivery environment, professional associations have developed as de facto registration boards, monitoring complaints from the public and providing continuing education to assist in maintaining and improving the quality of service delivery. Membership of such professional associations is not enforceable however, and thus there is no financial or legislated imperative for many allied health services to join a regulated collective.

Extended scope and advanced practitioners need to be considered in any new allied health model. Extended scope practice is recognised more internationally than in Australia, although there are many opportunities for Australian allied health practitioners in this area. Extended scope practitioners undertake limited activities usually undertaken by other health professionals, in particular medical practitioners and nurses. The role of extended scope practice for allied health is growing in response to patient expectations, medical and nursing workforce shortages, the capacity of trained allied health practitioners to undertake extended scope tasks safely and effectively, and lack of other service providers particularly in rural areas or in out-of-hours situations. Examples of extended scope practice include non-medical prescribing, delivering injections and undertaking minor surgical procedures, which are currently not part of many recognised allied health discipline professional competencies. Advanced scope practice, on the other hand, refers to profession-

ally advanced roles within currently recognised competencies, such as allied health practitioners triaging patients in hospital Emergency Departments and referring them to appropriate care (which may not be medical or nursing), allied health practitioners ordering radiographic examinations or referring patients directly to medical specialists. Many training institutions in Australia are considering including aspects of advanced practice in their postgraduate clinical programs, not only to ensure that their graduates have competitive and flexible skills to apply to a changing health care environment, but also to provide better, more efficient and effective, and more equitable health care to more Australians.

The private allied health sector is in a better situation to respond to market forces than the public sector. There is minimal government funding for private allied health in Australia, except for optometry assessments, and for a maximum of five allied health services per year for patients with chronic disease.<sup>9</sup> Psychologists can access Medicare funding in a similar manner specifically to manage mental health issues. General practitioners first need to complete comprehensive patient assessments which are required by Medicare before agreeing to fund allied health services. Private sector allied health service fees are often recommended by professional associations, although the amount charged is regulated more by consumers' capacity and willingness to pay. Clinicians with higher degrees (Master degrees, PhDs) or with recognised clinical specialities developed over years of practice can often command higher fees than their peers, as patients are believed to recognise and value higher degrees and clinical experience. The Australian Physiotherapy Association specialisation program is a professional program which recognises the importance of clinical competence and experience, coupled with research and quality improvement principles.<sup>10</sup> Clinicians working for wages in the private sector allied health system have a greater capacity than their public sector peers to negotiate for adequate remuneration, often determined as a percentage of the fee charged to the patient.

Conversely, the current wage structure in many states in the public sector for allied health clinicians provides little recognition of professional status in terms of clinical experience or academic training. Clinicians with higher degrees or recognised clinical specialities are not remunerated in a manner that recognises their enhanced standing. Thus there is little incentive for allied health clinicians in the public sector to pursue excellence to ensure career advancement. Senior allied health clinicians in the private sector often tend to move into management rather than recognised senior clinician mentor roles, which may be recognition of inadequate clinical remuneration or for greater job satisfaction. Providing mentorship and training for students is one of the few ways in which public hospital clinicians can be recognised for clinical excellence.

Despite minimal financial incentive to improve service quality, continuing professional development for clinicians is well established in many allied health disciplines, with membership of professional associations tied to participation in continuing education programs. Access to post-graduation training is provided for private and publically employed clinicians, and is mostly presented out of working hours (evening and weekends). It seems accepted in the allied health disciplines that professional education is not supported by the employer (public or private). This type of education is often provided independently of the recognised training institutions (universities, vocational training establishments), and does not result in a recognised postgraduate degree. It is usually provided, or organised, by professional associations at a cost. As the associations are all discipline specific, there is little opportunity currently for cross-fertilisation of knowledge between professions by attending multidisciplinary professional education courses.

### ***Multidisciplinary, cross-disciplinary or interdisciplinary activity in allied health***

While most allied health disciplines would appear to be comfortable with the concept of existing within such a collective, they generally operate as individual disciplines, with little

## 2 The Allied, Scientific and Complementary Health Model

### Allied, scientific and complementary health



Allied health: therapy	Allied health: diagnostic and technical	Scientific	Complementary services
Advanced practitioners	Advanced practitioners	Advanced practitioners	Advanced practitioners
Nutritionist and dietitian	Audiologist	Pharmacist	Osteopath
Occupational therapist	Orthotists and prosthetists	Laboratory scientist	Chiroprapist
Physiotherapist	Orthoptist	Medical scientist	
Psychologist	Optometrist	Technical officer	
Podiatrist	Radiation therapists	Environmental health officer	
Social worker	Medical imaging	Cardio technician	
Speech pathologist	Diagnostic radiographer	Cardiovascular profusionist	
Exercise physiologist	Sonographer	Nuclear medicine	
Ambulance paramedic	Radiographer		
Music therapist	Biomedical engineer		
Art therapist			
Exercise physiologist			
Ambulance officer			
Intensive care paramedics			
Allied health assistant	Equipment technician	Pharmacy assistant	Diversional therapist
Physiotherapy assistant	Dental technician	Pharmacy technician	Recreation therapist
Podiatry assistant			Recreation officer
Therapy aide			Social welfare worker
Physical education officer			Counsellor
Para medical aide			
Dental assistant			
Dental hygienist			
Lifestyle coordinator/advisor			
Residential care officer			
Occupational therapy assistant			
Speech pathology assistant			

Disciplines have been placed in their primary mode of service group. The model has semi-permeable vertical walls as some of the professions will straddle across the groupings (eg, pharmacy, audiology and radiographers). This structure will ensure the inclusion of all the professions without having to make individual disciplines decide definitively the group in which they sit. It also has room for the development of further services within professional groups such as Allied Health Assistants, Consultant Practitioners and Advanced Practitioners.

knowledge of what other disciplines do, or how care can be integrated. This is highlighted by the lack of mechanisms in clinical practice or research to support multidisciplinary activities, in terms of multidisciplinary assessment processes, joint care planning, joint care delivery or joint and agreed measurement of relevant outcomes. One of the few recommendations which support integrated care are the current guidelines for the management of acute stroke, in which there are some 38 recommendations relevant to allied health, with most of these focusing on integrated service delivery rather than single discipline activities.<sup>11</sup> These recommendations focus on outcome (such as safe swallowing mechanisms, better balance, safe ambulation etc) and recognise the importance of multiple discipline philosophies to ensure the best outcomes. However, the discipline-specific training offered in universities and vocational training institutions for many of the allied health disciplines continues to support a single discipline focus. Providing joint (multi-disciplinary) training for groups of allied health disciplines in terms of core competencies, and task-specific education would enhance each disciplines' knowledge of the specific skills held by other disciplines, and may ensure more integrated and comprehensive health care delivered in future health care models.

## Our model

We propose a new model to define allied health. Our model provides an integrated approach to realigning professions which are allied by the nature of what they do, who they work with, and their career development opportunities. This model also explores role-related differences from medical and nursing care. We called it the ASC (Allied, Scientific and Complementary) health model.

We proposed four allied health groupings which could be collectively described as allied, scientific and complementary (ASC), comprising allied health therapy, allied health diagnostic and technical, scientific services, and complementary services. This nomenclature reflects the core

tasks, training, competencies and consumer focus of the disciplines, as conceptualised in Box 1. Within these groupings we then allocated the broad list of current allied health disciplines based on their primary (core) tasks (Box 2). We separated our groupings by semi-permeable walls, which acknowledge that some health disciplines in one grouping may undertake similar tasks to those in other groupings, or that some health disciplines move between task groupings. This framework promotes the flexible inclusion of disciplines by task rather than by discipline name and allows for inclusion of new services on a task-by-task basis.

Within each grouping, we also propose a third element — that of career pathways and seniority levels — that recognises competencies, experience and relevant postgraduate study. Box 3 outlines this element, which includes the role of the training practitioner in providing some services (during clinical placements) as well as the emerging roles of allied health assistants, and extended and advanced scope practitioners.

Consequently, our model could be proposed as three dimensional (Box 4), with linkages in the x axis (horizontally across the model) (as in Box 1 and Box 2) to recognise different tasks undertaken within the one ASC health discipline; linkages in the y axis (vertically in the model) that recognise similar tasks undertaken by different ASC health disciplines (as in Box 2); and linkages in the z axis (model depth) recognising within-discipline movement via professional enhancement and skills escalation training (as in Box 3).

## Applying the model

We initially developed the ASC health model to contextualise the increasingly complex area of allied health service delivery. While this model was largely framed by service delivery, workforce planning and professional development issues, we believe that teaching and learning could also be reviewed in this way to proactively address emerging issues, such as cross-sector training, skills escalation and role redesign. Current Australian education for disciplines in our ASC health model is largely discipline, competency and institution



### 3 The allied, scientific and complementary health workforce

#### Allied, scientific and complementary health



Allied health: therapy	Allied health: diagnostic and technical	Scientific	Complementary services
Advanced practitioners	Advanced practitioners	Advanced practitioners	Advanced practitioners
Senior clinicians	Senior clinicians	Senior clinicians	Senior clinicians
Clinicians	Clinicians	Clinicians	Clinicians
New graduates	New graduates	New graduates	New graduates
Assistants	Assistants	Assistants	Assistants
			Non-graduates

specific. Thus it is not primarily focused on celebrating or teaching shared knowledge and competencies across disciplines, or in ensuring skills escalation which integrates learning opportunities in vocational, workplace-training and university-training sectors. The ASC health model could assist educators to plan courses that taught common core tasks of ASC health disciplines to students across health courses. It would also assist educators to construct training programs that taught a mix of ASC discipline students about the components of multidisciplinary care in which they could all participate.

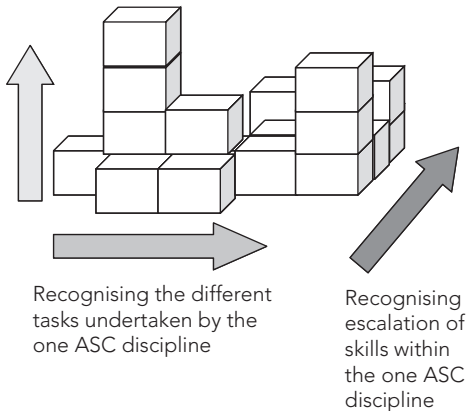
We tested our model in two theoretical scenarios. In the first scenario, we considered how a “new” practitioner could be trained to address emerging community needs related to the management of chronic disease and life-styles. Proactive management of chronic disease has been constrained by the traditional focus of many health providers on symptoms and crisis management, rather than on wellness and self-management. Several of our team had been challenged at policy levels with providing services that were cost efficient, responsive, holistic and effective for a large number of people with diagnosed chronic diseases who were unable to be managed successfully within traditional medical models. Few traditional health providers were positioned to provide the proactive care required to reduce these patients’ health problems in a way that

would reduce their future high use of the health system. By examining the multiple needs of these patients within the framework of the ASC health model, we identified the tasks required of one health provider to comprehensively manage these patients’ needs. From a policy perspective this allowed us to thread together a health provider job specification which included skills in addressing the pharmacological, exercise, dietary, psychological and educational requirements of patients with chronic disease. The permeability of the columns in our ASC health model made it easier from a policy and planning perspective to cross-link aspects of different allied health professionals’ tasks to frame the parameters of this new role. It also made it easier to conceptualise a training program that would produce this new health worker. By taking this approach, we were also able to identify how and when the requisite training could be provided, as well as opportunities for sharing training resources within current training institutions.

Our second theoretical scenario was an organisational one. The historical fragmentation of allied health services within and across institutions has constrained opportunities for developing a united voice in management. It is well-recognised that this has impacted on working conditions, wage negotiations, career development and staff retention.<sup>1,4,7</sup> It is likely that further fragmentation could occur by the intro-

#### 4 Conceptualisation of the uses of the model

Recognising ASC disciplines which undertake similar tasks



ASC = allied, scientific and complementary.

duction of emerging new disciplines, such as complementary health care. Our model in its basic one-dimensional form (Box 2) provides a framework, and a reminder, for organisation managers of the number of ASC health disciplines that need to be considered in workforce planning, industrial negotiations, occupational health and safety, role redesign, staff recruitment and retention, and continuing education. By also considering the permeability between the model groupings, managers could assist in improving organisational efficiency by reducing duplication of effort. The individuals sitting within the ASC health model would also be reminded of who their colleagues are, and who does similar work. This will produce opportunities for role sharing, training, skill enhancement, wage negotiation and parity of working conditions. This should reduce inefficiencies in service delivery, which should improve costs and patient outcomes.

#### Conclusion

We believe that the ASC health model is comprehensive, innovative and flexible. It can incorpo-

rate traditional as well as new services which are congruent with allied health foci, and it broadly recognises allegiances, responsibilities, training, tasks, career development and discipline directions. This model will allow health care organisations to determine their allied, scientific and complementary health (ASCH) workforce (formerly allied health), and to plan ahead for recruitment, staff training and retention, and remuneration.

This model provides a structure to encourage all allied health staff, who either provide direct services to patients or customers or support those practitioners who do, to participate in the workforce reform and development activities that are predicted over the next few years in Australia. This model would appear to provide flexibility for health policy makers when reviewing or building organisational structures, by providing a framework from which the allied, scientific and complementary health professions can take ownership and leadership during health sector reform.

This model will assist educators when reviewing and planning their training programs, to identify commonalities and opportunities for new courses, and for sharing training and resources. This should produce educational cost-efficiencies, and may result in a future ASC health workforce which is better equipped to work in both single and multidisciplinary roles in a way that enhances medical and nursing care. Providing a recognised career structure for the ASC health workforce will assist practitioners to see membership of this group as a long-term career choice. It will encourage them to seek appropriate professional education throughout their career, so that their skills can meet the changing needs of the Australian health consumer, and the changing requirements of health funders.

#### Competing interests

The authors declare that they have no competing interests.

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