

Multi-professional practice, interprofessional education: lessons and evidence for rural and remote Australia

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The reform of public services across a range of health care systems highlights the need for whole system workforce innovation in the face of demographic, technological and cultural shifts in the wider environment (1). The provision of effective health and social care services also increasingly reflects the importance of effective team working and collaboration (2). Sadly too often services failures in health and social care reflect a lack of preparation of individuals and organisations to work effectively in multi-professional teams. (3)

This presentation will explore the drivers for workforce reform as the context for setting out the work of the New Generation Project. The Project as one part of its work has seen the reform of eleven pre qualifying health and social programs with the integration of Common Learning, enabling all 1500 students each year to “learn with, from and about each other” (4). The lessons and evidence from the Project to date will be related to the challenges faced by the provision of remote and rural services.

THE DRIVERS OF CHANGE

Within the context of the health and social care workforce the drivers for change can be seen as a range of inter related factors reflecting the operating environment including demography, technological change, consumer expectations and resources.

Demography

Over the period of a decade, 1991–2001, the overall UK population increased between by 0.3%, but within this there have been significant structural changes. The largest increases have been in four age groups, the very elderly age group of 85 and over, those aged 45–64, 30–44 and children aged 10–15. One area of decrease has been in the 16–29 age group due to low fertility rates during the seventies (5). Along side this over the past 40 years life expectancy at birth has also continued to increase, the UK Government Actuary’s Department (GAD) estimates that by 2021 the life expectancy at birth for males will be 78.6 and for women 82.9 (6). At present within the UK there are 4 people of working age population for everyone over 65. The GAD predicts that this is likely to fall to between 2 to 3 and 2 to 6 by the middle of the 21st century. As a consequence the average age of the British workforce will continue to rise and “from 2005 onwards the proportion of prime-aged adults (30–49) will begin to fall, with the proportion of 50–64 year olds rising from around 20% per cent in 2000 to 32% in 2020” (5).

The population profile of Australia shows signs of similar changes. The falling fertility rate and growing life expectancy indicates that the population will continue to age into the next century (7). The Australian National Bureau of Statistics (8) predicts that across all States that by 2051 the population aged over 65 years is set to at least double. At the same time the present fertility rate remain below the natural replacement level therefore:

based on assumptions of continuing low fertility (even the 'high' fertility assumption of 1.75 births per woman is below replacement level) and a small increase in life expectancy, Australia's population is projected to continue ageing into the next century. (7)

One consequence of this will be the of impact of such changes upon the productivity of workforce as a whole (5) An increasingly mature labour force need not be seen as negative, the work and live skills of a mature workforce could have positive effects on productivity; a counter argument is that an aging workforce will have a negative effect on innovation and productivity, let alone energy and strength (9). As the workforce ages it will force employers to think hard about the need to maintain the employability of older workers, the relevance of their skills and the mobility of the workforce in relation to the location and composition of jobs.

Technology

Another major factor in the operating environment that will drive changes in the workforce is that of technology. Technology has always acted as a powerful driver in changing human services, especially so in health. Researchers are now able to combine biochemistry and computer science to explore new drug design; we also see the development of transgenic plants and animals providing new form of production for therapeutic agents.

In the area of imaging the development of a wide range of scanning technologies have all revolutionised the standard and process of whole body diagnostics. We have moved from 2D to 3D imaging. Advances in display and transmission technology now enable digital images to be sent down the wire all over the world. The changing workforce mix undertaking interventional diagnostics is already under way. We have seen significant transfers of procedural technologies within the area of diagnostics and the growing role in the UK of Associate Practitioners specifically educated to undertake such roles. Image guided surgery and radiotherapy now enable treatment that would other wise have been be impossible. Developments in endoscopic (keyhole) surgery are reducing the need for invasive surgery, changing postoperative recovery times, lengths of stay, and gradually perceptions or hospital experiences and expectations amongst the general public. Fibre optic technology, miniaturisation, instrument improvement and engineering developments, as well advances in navigation devises will all impact on the practice of surgical intervention. Robotic surgery is under development which in turn begs the question about the appropriate preparation and development for such roles. Day surgery and ambulatory care are already leading to different forms of service provision. The logical consequence of which must be to consider not only working patterns but also the development and education of the relevant workforce.

Then there is the whole area of genetics and emerging therapies, as a result of the Human Genome Project which seem set to increase the ability to identify susceptibility, as well as development in vaccines. All of which will have significant complex ethical and social implications.

All of these technological developments, along side information technologies will advance the practice of health and social care and as a consequence play a role in shaping the future workforce.

Consumers

Patient knowledge is become of growing importance in the engagement between professionals and the design and delivery of services. In the UK Patient and Public Involvement is now a central theme of health service reform (10). The power of the web as a means to make information available and to connect people has already led to the development of innovative forms of engagement between professionals and people (11).

Resources and capabilities

All of the drivers of service change have implications for and are dependent upon the workforce available to deliver health and social care services. In the UK the Wanless Report highlighted that in total the health and social care sectors already account for around one in ten of the UK working population (12). The report made clear that the workforce reforms necessary to secure the NHS long term were more than a matter of the number of staff, “*although the number of health care professionals is important for the capacity of the system, arguably the way the workforce is used is even more important*” (12) (para 11.52)

Across the globe nation states are taking seriously the challenges faced in creating workforces able to deal with the increasing and changing demands for services (10;12-14). A significant feature of many of these policy shifts has been recognition of the importance of working in teams within the existing workforce and the need to reform the way we prepare our future generations of practitioners. As part of its wider health care reform program the Government of Western Australia has identified the need not only develop a systematic approach to workforce planning but to work with the education sector to reform the provision of undergraduate training (15).

GROWING THE EVIDENCE

With the call for interprofessional education now firmly in place and in the context of the prevailing evidence based culture, the need to provide empirical data about the impact of interprofessional education has become essential.

Over the past decade there has been a growing interest in the development and exploration of interprofessional learning (16). Barr et al (17) have systematically reviewed evaluations of interprofessional education in health and social care in the UK. The purpose of the review was to:

- identify methods by which such interprofessional education in health and social care has been evaluated
- assist others to replicate and develop those methods.

Initial methodological requirements constrained the selection of studies to Randomised controlled trials (RCT), controlled before and after studies (CBA) or interrupted times series (ITS) designs. However, there were no such studies available. They concluded that this should not be interpreted as an indication of the lack of effectiveness of interprofessional education but simply pointed to the worrying lack of appropriate research. The need for future research to address methodological issues and clarify outcomes, interventions, timescale and participants is clear.

The reviewers found very few studies measured outcomes and those that did, focused on the initial acquisition of knowledge and skill often based on participants’ perspectives. The need to utilise a wider range of methodologies to reflect both process and outcomes was clearly identified but the methodological challenges of randomised controlled trials in this area were also recognised. The review further revealed that:

- the majority of evaluations reported post registration continuing professional development
- the educational experience usually occurred in a practice or work setting.
- the location of interprofessional education was often in practice rather than a university.

- less than 30% of studies involved pre registration students
- the quality of the studies was variable and largely adopted pre and post intervention designs. (17)

The review concluded that more prospective and longitudinal studies are needed. These should be designed to reflect the complexity of factors that influence interprofessional education, including both those that facilitate and those that restrict the process. Of the studies available many are largely atheoretical, based on short term interprofessional inputs and have used process measures as self reported short term outcomes – some of them, often immediately post intervention. Few studies have been designed to provide evidence of longer term outcomes. It is therefore vital that research investment is identified and directed towards addressing the outcomes and the impact of this policy direction (18) across the global community.

THE NEW GENERATION PROJECT

As models of service delivery and workforce reform so too must the providers of education. In a whole system approach to education and workforce reform the New Generation Project was established at the University of Southampton in partnership with the University of Portsmouth and the Hampshire and Isle of Wight Workforce Development Confederation. Within the context of the modernisation of the NHS the Project has been recognised as a ‘leading edge site’ for taking forward interprofessional, common learning. From the outset of professional preparation the values and norms of multi-professional working through interprofessional learning, building mutual respect and understanding should form part of the preparation of future practitioners (19).

Over the past four years the Project has seen the reform and revalidation of eleven pre qualifying professional programs (Audiology, Nursing, Medicine, Midwifery, Occupational Therapy, Physiotherapy, Podiatry, Pharmacy, Radiography (diagnostic) Radiography (Therapeutic) Social Work). In preparing the future workforce opportunities have been systematically structured into the curriculum to enable students from across the eleven professions to learn “with, from and about each other” (4) to develop their capability to work effectively in teams (2). For Common Learning the students work together in small inter professional groups at different points throughout the duration of their training. It is a course requirement which is assessed.

The intended outcomes are:

- respect, understand and support the roles of other professionals involved in health and social care delivery
- make an effective contribution as an equal member of an interprofessional team
- understand the changing nature of health and social care roles and boundaries
- demonstrate a set of knowledge, skills, competencies and attitudes which are common to all professions, and which underpin the delivery of quality patient/client focused services
- learn from others in the interprofessional team
- deal with complexity and uncertainty
- collaborate with other professionals in practice

- understand stereotyping and professional prejudices and the impact of these on interprofessional working
- practice in a patient centred manner.

The four Inter Professional Learning Units (IPLUs) that have been integrated into the programs focus on specific issues underpinned by a clear emphasis on developing team working capabilities, The IPLUs are based in University and practice.

The four IPLUs are:

- **Unit 1 – Collaborative Learning:** introduce students to the concept and practice of collaborative learning and team working and develop the knowledge management and IT skills.
- **Unit 2 – Interprofessional Team Working:** students apply their team working and negotiation skills in an interprofessional context focused on audit
- **Unit 3 – Enabling Change in Practice:** will help students gain an understanding of the need for role flexibility and the complexity of introducing change into interprofessional service provision.
- **Unit 4 – Interprofessional Problem-solving:** students work as a team to build an interprofessional understanding of a complex ethical issue or service failure (20).

The New Generation Project represents a real and tangible response by the organisations involved to address the pressures that we all face in the complex environment in which we seek to prepare a workforce appropriate for modern health and social care services.

LESSONS FOR REMOTE AND RURAL SERVICES

The drivers of service and workforce change in the remote and rural setting raise some unique challenges not seen in the likes of Hampshire. However in essence we are all facing similar issues. If we accept that the drivers of service model changes also the drives of workforce change then the questions we have to ask must include:

- What capabilities does your workforce need?
- Are the current roles appropriate?
- Will the exiting preparation deliver what you need?
- How are education providers responding to workforce needs?
- Do you know where your constraints really lie?
- Can you take a whole system approach to change?

“Traditional conceptualisations of medicine, nursing, physiotherapy... are unlikely to be sufficiently flexible to address 21st century needs” (21)

Patterns of practice have never stood still. The reality is that change is today and tomorrows constant but how do we prepare both the existing and the new generation for a world in which team based multi-professional working and the development of new roles are the new reality.

The New Generation Project is but one attempt in a specific context to address some of these issues. We still have a lot to do and a lot more to learn.

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