Using a virtual community to enhance nursing student's understanding of primary health care

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Introduction

The need to reform the Australian healthcare system and to reorient health services towards primary health care has grown over recent years, resulting in Australia's First National Health Care Strategy (Department of Health and Ageing, 2010). A past tendency for Australian university programmes to focus on acute care or hospital based services rather than primary health care in the preparation of students for practice has also become apparent (Keleher, Parker, & Francis, 2010). This tendency needs to be overcome to ensure graduates have a sound understanding of primary health care services and how these contribute to individual and community health. The preparation of undergraduate nursing students therefore needs reorientation to maintain alignment with planned changes in future health care delivery and to adequately prepare nurses for practice. This paper describes how the introduction of a new curriculum created an opportunity to re-evaluate past approaches

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to teaching primary health care and led to the creation of Wiimali, a virtual community.

Background

Primary health care is classically defined as ''essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination'' (World Health Organization, 1978, p. 1). It is based on the social model of health (Keleher, 2001), a model which views health as multifaceted, which focuses on social rather than biological determinants of health, and aims to achieve health through activities beyond those of the health sector (Germov & Richmond, 2009; Rifkin & Walt, 1986). The social determinants important to this model are increasingly recognised as central to individual and community health (Keleher, 2001), and are described as ''…the conditions in which people are born, grow, live, work and age, including the health system.'' (World Health Organization, 2012).

Primary health care, as a health care philosophy, is underpinned by the principles of social justice, empowerment/community participation and equity (Keleher, 2001; World Health Organization, 1978). Implied in the concept of equity is a focus on addressing the underlying reasons for unequal distribution of resources, so increasing social and economic justice in the way health resources are accessed and used (Rifkin & Walt, 1986; Young & McGrath, 2011). The World Health Organization (2012) argues that differences in social determinants of health are largely the basis for unfair health inequalities. A measure of primary health care's success is the equitable provision of health resources to all people (Rifkin & Walt, 1986). One of the main differences between traditional health services and primary health care is that primary health care is community based. It involves communities in health, is concerned with empowering and enabling people to determine their own destiny, and involving them in the planning, implementation or evaluation of programmes that improve health (Keleher & MacDougall, 2011; Rifkin & Walt, 1986).

To practice in a way consistent with primary health care, health care staff and their organisations need to use strategies which are consistent with the principles underpinning primary health care and a focus that addresses the social determinants of health (Adrian, 2009; World Health Organization, 1978). Services based on primary health care are comprehensive and seek solutions to health problems that are not addressed by biological, genetic or biochemical solutions (Keleher, 2001). They focus on addressing the root cause of health problems experienced by individuals and communities, reducing the effects of disadvantage and health inequality (Keleher, 2001). This orientation challenges the current health system's focus on disease and finding cures (Nesbit & Allen, 2011). Advocated as part of primary health care are activities which focus on anticipating and preventing health problems, promoting community participation, ensuring access to health related services for all people and providing services at a cost that is affordable

and as close as possible to where people live (World Health Organization, 1978). Healthcare staff and their organisations work in partnership with people and communities to enable and empower change that is local, affordable and sustainable (Talbot & Verrinder, 2010; World Health Organization, 1978). Intersectoral collaboration, a strategy to address social determinants of health and structural barriers to health, refers to collaborative transdisciplinary partnerships, with the needs of the community dictating the most appropriate services and service relationships (Adrian, 2009). Transdisciplinary partnerships go beyond multidisciplinary and interdisciplinary partnerships, by facilitating intersectoral relationships which value expertise in areas beyond those addressed by health disciplines. This might include partnerships with services that provide education, transport or income support, reflecting an understanding of the social determinants of health. Primary health care should form the nucleus of the health system (World Health Organization, 1978).

Australia is currently in the process of implementing health care reforms which target changes to primary health care, hospitals, health care delivery and financing systems (Department of Health and Ageing, 2010; National Health and Hospital Reform Commission, 2009). Specifically, an increased emphasis on primary health care and the prevention of illness are articulated as being central to effective reform by the National Primary Health Care Strategy (Department of Health and Ageing, 2010), the National Preventative Health Taskforce (National Preventative Health Taskforce, 2008), and the Nursing and Midwifery Consensus View on Primary Health Care in Australia (Adrian, 2009). Inherent in this emphasis is a need to strengthen primary health care systems and shift the context of service delivery from hospitals into the community (Keleher et al., 2007, 2010). This shift needs to be paralleled by a workforce with knowledge and skills oriented to the social model of health and a social determinants approach (Douglas et al., 2009). Also important is a workforce that is able to navigate the tension between providing a comprehensive, participatory and health promoting approach, and a need to provide efficient and sustainable direct care and medical interventions within the community (Nesbit & Allen, 2011). Whilst the term primary health care is used to refer to comprehensive services, more selective primary care services can be considered a subset of primary health care (Adrian, 2009; Awofeso, 2004; Cueto, 2004). Primary care is illustrated by health services delivered by many practice nurses and doctors working in general medical practices across Australia (Adrian, 2009; Australian Nursing Federation, 2011).

The context of reform and service reorientation has highlighted that the Australian primary health workforce is troubled by restricted availability of health care staff, changing role demands and changes to role characteristics (Douglas et al., 2009). To achieve the aims of current reforms, future health care staff will need to be knowledgeable about primary health care philosophies, appreciate the contribution they make within whole health systems, be able to work within a primary health care context and be sufficient in supply to meet demands of new and ongoing primary health care services. To this end Douglas et al. (2009) argues that nursing education needs an increased focus on primary health care and community placements. This challenges the

way undergraduate nursing curricula have developed since the mid 1990s. These curricula have come to prioritise the preparation of nurses for practice in acute care contexts (Heath, 2002) or, where primary health care, prevention and health promotion has been included, its treatment has not been comprehensive (Keleher et al., 2007, 2010).

Responding to the challenge

At the University of Newcastle the timing of curriculum re-development aligned with that of the national health care reform agenda and provided a strategic opportunity to rethink the way nursing students were learning about primary health care throughout their undergraduate programme. The new curriculum needed to be responsive to contemporary health care imperatives, including the shift inherent in health care reform agendas towards primary health care, be evidence-based and educationally sound. The curriculum also needed to engage students, motivate them to learn and ensure that they graduated with a requisite standard of professional competence suited to future workforce contexts, including those in primary health care.

A philosophy for the programme was developed through an extensive process of consultation with key stakeholders including students, academic staff and clinical partners. Reflected in the philosophy were contemporary professional, educational, health care, social, economic and cultural issues, and the attributes of a professional nurse that were considered essential for future health contexts. The philosophy of the new undergraduate programme therefore expressed primary health care as a central concept along with person-centred care, holistic health care, partnerships and therapeutic relationships, clinical communication, critical thinking and clinical reasoning, cultural safety and Aboriginal and Torres Strait Islander health, history and culture, reflective practice, quality and safety in health care, law and ethics, research, palliative care, quality use of medicines, human bioscience, comprehensive clinical knowledge and skills and information and communication technology. These concepts were considered to be interrelated, providing a strong and coherent matrix, with each concept linked to and supportive of the others. They were also considered relevant to current practice and visionary for future practice requirements.

In line with the philosophy of the new curriculum and to advance the agenda of increasing nursing students' understanding of primary health care, a new course was developed and introduced into the first semester of the new undergraduate programme. In this course, students are introduced to philosophies and principles of primary health care, social determinants of health, models of health, equity/inequity, social justice, cultural safety, health promotion and illness prevention. To complete the course students attend a lecture and tutorial each week and undertake a 32 h self-directed field study at a community service of interest to the student; this service can be from any sector so students attend a range of government and non-government facilities as well as a broad selection of community health services.

Important to the design of the new primary health care course was creating learning opportunities which were engaging and helped students to understand the philosophy of primary health care and how this is enacted, to different degrees, within Australian communities by different services. Learning during the course was enhanced by incorporating perspectives from different disciplines, including sociology, nursing, midwifery and Aboriginal and Torres Strait Islander health. Guest lecturers from key local primary health care services are included to illustrate primary health care in action, particularly service models based on the social determinants of health and demonstrating intersectoral collaboration, orientations critical to successful primary health care initiatives. To complement lecture materials and to help bridge student learning across lectures, tutorials and the field study, a virtual community called Wiimali was created. This community provides engaging stimulus materials which are used in tutorials, lectures and self-directed activities to guide student learning about how the philosophy of primary health care is actioned in the real world, thus helping them to translate what they learn to what they observe during their field study.

Using Wiimali to facilitate learning

Virtual communities have been described as fictional web-based communities formed through an aggregate of character and community stories (Carlson-Sabelli, Giddens, Fogg, & Fielder, 2011). They simulate a real community in a way that creates a sense of authenticity and provide opportunities for engagement with its community members. Like other virtual communities, such as The Neighbourhood (Giddens, Fogg, & Carlson-Sabelli, 2010; Giddens, Shuster, & Roehrig, 2010), Mirror Lake (Curran, Elfrink, & Mays, 2009), Second Life (Skiba, 2007) and Stillwell (Walsh & Crumble, 2011), Wiimali is founded on experiential and constructivist approaches to learning. Virtual communities achieve student engagement, in part, by harnessing visual and auditory media to capture students' interest and invite further exploration. However, unlike other virtual communities Wiimali encourages students to explore and understand the community as a whole by focusing not just on simulated residents and health professionals but also on the actual community itself; its history, demographic profile, resources, problems and assets.

Students are introduced to Wiimali in the first lecture and, for the first tutorial, access Wiimali in Blackboard™, a learning management object system. Initially students are invited to undertake the virtual tour (Image 1), a multimedia introduction which provides a sense of what it is like for the people of Wiimali to live in this community and a description of key aspects of the community; what has happened over time, where people live, where they work, and how they spend their leisure time. Students then become familiar with the layout of the town by exploring key sites located within an interactive map (Image 2), a step somewhat like a visitor familiarising themselves with a town they visit. The map identifies key landmarks and is central to students' exploration of community health and primary health care throughout the course. Student navigation around Wiimali is facilitated by selecting 'buttons' within Blackboard™. The buttons used in Wiimali that assist student exploration and guide communication in tutorial learning activities are shown in Box 1.

Image 1   Virtual tour.

Image 2   Map of Wiimali.

Box 1 Wiimali Navigational Buttons
- Virtual tour
- Map of Wiimali
- Wiimail Chronical
- Community Radio
- Blog
- Help Using This Site
- Acknowledgements
- Announcements

Within the Wiimali map each service or location 'opens' and provides further detail about each context and options for exploration. The general practice clinic, for example, is a typical primary care service. When this area is opened the clinic has images and audio recordings of interviews with the nurse manager and practice nurses who work at this service. They tell their own story, speaking about their roles and how their work impacts on the members of the community. Auntie Sandra, an Aboriginal elder, shares her passion about the health of her community. The occupational health and safety nurse at the local coal mine talks to students about her work and its impact on the health of the miners, many of whom live in the Wiimali community. In each area students hear the voices and stories of real people in real services, stories which have been relocated and branded to belong to Wiimali. For students these are 'living examples' of people working to improve the health of individual community members and the health of the community as a whole.

The combination of multimedia and community member stories creates a dynamic community environment in which residents have interconnected lives and real everyday issues which impact on their health. Important to creating the sense of a real community and engaging with this community to understand concepts central to primary health care, is the inclusion of multiple places which have key influences on the health of community members and which students may not initially see as connected and important to health; such as the local council chambers, migrant and refugee centre, and Aboriginal Medical Service. Inclusion of the Council Chambers highlights the role local councils play in the health of Australian communities and provides demographics of the community.

To help keep the community evolving and feeling authentic, each week a local newspaper and radio broadcast are delivered to the community and the students. Stories shared through the local radio broadcasts and the Wiimali newspaper add information about government strategies related to primary health care services for communities and how other government and nongovernment services implement policies which reduce injury and improve the health of populations (see Image 3). These are tailored to the focus of the tutorial activities for each week and promote events which relate to different levels of concern within primary health care; policy, community action and individual services/care. They create a sense that the community is changing and help students to build a deepening understanding of the community and the complexity of health issues over the duration of the course. The genuine feel of the community is also achieved through each of the people who contributed to the multimedia items coming from the real world. They

Image 3   Wiimali Chronicle newspaper.

have brought their knowledge and passion about their life roles with them into their presentations, helping the multimedia presentations to appear genuine in the context of the virtual community. Adding to the reality experienced when accessing Wiimali are the community member blogs. Here the voice of individual community members and health professionals are heard by students. Community members openly share their thoughts about what is happening in their town, even at times expressing ideas which are not politically correct (Box 2). In this area students can respond to community member blogs by 'blogging' themselves.

Throughout the course, tutorial preparation activities invite students to return to Wiimali and explore particular parts or aspects of the community, aspects directly linked to the learning objectives for each tutorial. Questions are provided to guide individual exploration, and to help students apply course concepts before tutorial attendance. During tutorials Wiimali is opened and used as a shared learning space so the ideas students have gained from their preparation are discussed, thus clarifying ideas and use of concepts central to understanding primary health care. Wiimali is an embedded part of the course and learning for students. All aspects of the Wiimali virtual community help students to consider and integrate multiple influences on the health of people and the community, as well as the different roles community members and services play.

Discussion

What is different about Wiimali is that this learning space is embedded, makes use of social and physical contexts important to primary health care and is a shared community which enables students and tutors to explore separately, discuss together and apply course concepts using common material which simulates a real local Australian community. It facilitates student interaction with people in a simulated community environment and promotes understandings which are located within broad socioeconomic and cultural settings. Situating learning in this way helps to align the student's learning experiences with the complexity of future practice, offering strategies which build towards what McKenzie, Morgan, Cochrane, Watson, and Roberts (2002) describe as authentic learning; learning that is of relevance or appropriate to the world that graduating students will enter. It is important to acknowledge that whilst simulating a real community and existing health systems or processes, Wiimali does not actually exist. Community services or aspects of the community can be explored by students and tutors in a safe and neutral environment, with each person able to choose to exit the community at any time. Having a shared community environment, along with contextualised learning, is reflected as being important to students in the course. This is illustrated by student comments made in response to the evaluation question 'From your perspective what was the most beneficial aspect of the Wiimali virtual community?'

> Having an online place where we could go to explore the concepts being taught in the lectures and tutorials from the course.
> It was helpful to be able to put what we were learning into a real life perspective; to have a small community that you could analyse and relate to everyone's own community.
> The Wiimali virtual community was a very clever and effective way of applying concepts of primary health care to better understand it ... a way that we all had the same thing to relate to, as using personal experiences or perspectives can lead to 'a lot of beating around the bush,' so to speak.

Box 2 Community Member Blogs
Community Nursing

Today I helped one of my community nursing colleagues by visiting her client, Brian. When I arrived at Brian's house I was struck by how overgrown the garden was — there didn't even seem to be a clear way to the front door. After I got my gear together I managed to find an over grown path that wove it's way towards the front porch. I was taken aback by how unused the path was; by how lush and overbearing each plant was and how the lawn was taking control of the garden beds. Not many people had ventured up this path in the last few weeks.

I stepped up onto the porch to knock on the front door — my colleague had said to knock loudly as Brian had very poor hearing from industrial deafness. To my surprise the floor gave way and I was thrown off balance, landing on my side with my foot stuck in the broken boards. I was all right, just a little shaken. But how can things get this bad when you live in Wiimali? Don't neighbours notice and offer to help? Who gets the post and puts the bins out? How do people survive like this?

I'm free...

My name is Eloise. I have just 'graduated' from Brighter Futures, an early intervention programme run by Mission Australia for women who have experienced prolonged domestic violence and isolation. Through the programme I was enrolled in parenting classes (I have three children aged 2, 6 and 9), taught to drive and I learnt anger management techniques. I was given counselling and was helped to plan my life. They have helped build my self-esteem and I'm now doing a business course at TAFE. Leaving my partner, finally, after nearly 10 year of abuse was such a difficult decision — those of you who don't know what it is like won't understand why I felt paralysed to leave. You need to realise that the threats against me and what he would do to my children were real and I lived in fear every day. I was in a dark hole and I saw no way out. I was guilty and ashamed. Mission Australia really helped me see that things can be different. It's been a long journey, a difficult one... but to see my children happy, laughing and safe is wonderful. For me, life now holds hope and possibilities... because I'm free ...

Within the virtual community it was important to illustrate and confront students' learning about primary health care with poverty, inequities and marginalisation, aspects evident in real communities and essential to developing self-awareness about disparities in social status and the need for social change (Bennett, Jones, Brown, & Barlow, 2013). Understanding the social model of health and the social determinants of health was fundamental to students achieving self-awareness and these learning outcomes. The social model of health ''locates people in social contexts, conceptualises the physical environment as socially organised, and understands ill health as a process of interaction between people and their environments'' (Broom cited in Germov, 2009, p. 16). This model emphasises health equity and prevention of illness or injury, as well as collaboration and empowerment (Talbot & Verrinder, 2010). It underpins many health policies on a national and global scale, including the World Health Organization Commission on Social Determinants of Health's 2008 report 'Closing the gap in a generation: Health equity through action on the social determinants of health' (World Health Organization, 2008). In this report the World Health Organization argues that the 'high burden of illness... arises in large part because of the conditions in which people are born, grow, live, work and age — conditions that together provide the freedom people need to live lives they value' (World Health Organization, 2008).

In the social model of health, the social determinants of health are privileged. This view is different to the biomedical model of health which, whilst important, downplays the significance of influences on health that lie beyond the health sector, including values, vested interests, politics and context (Australian Institute of Health and Welfare, 2012; Baum, 2008; Engel, 1977; Germov, 2009; Sax, 1990). Some evidence suggests that industrialised countries can have more equitable and cost effective health outcomes by adopting a strong primary care orientation, particularly through targeted interventions early in the life cycle (Starfield & Shi, 2002). Providing students with engaging stimulus materials which mirror the day-to-day influence and variation in the social determinants of health and how health and other community systems act to promote or restrict equitable access to health was therefore central to achieving the aim of teaching nurses about primary health care in the course. Understanding social determinants of health has also become important to students, as reflected in their comments to the evaluation question 'From your perspective what was the most beneficial aspect of the Wiimali virtual community?'

Having a 'real life' reference of the social determinants of health.

To see a range of social issues that impact on the health of the community.

How people of different backgrounds can be affected in a community, have access to health care, etc. It was very interesting.

Seeing relevant issues within a community that reflect health issues within society. The information and stories could easily relate to any community across Australia.

Whilst implementing a virtual community has many advantages for learning about primary health care, it is important to remain mindful of some of the challenges. Different tutors and students will have access to various computers and software packages, creating a need for transparency about system requirements, software and browsers needed to access Wiimali. It is important to ensure that the virtual community is structured and accessed in ways that are intuitive to students and tutors who have not designed the site. Computer skills are needed by students and staff and, whilst assumed, may not be part of each individual's skill set. Having self-help information to improve computer skills can be beneficial as part of face-to-face sessions within the course, as can problem solving strategies within the community itself. When creating multimedia material, attention is needed to the privacy of contributors or their employers and the lifecycle of their content. Like the real world, the virtual community is not static and needs review and re-development to maintain currency and to reflect contemporary health issues. Ongoing commitment and finance is needed to ensure that the virtual community reflects current communities and health strategies, so remaining a useful way to facilitate learning about primary health care.

Learning using a virtual community in large undergraduate courses is often reliant on a team of tutors, many of whom may be sessional academics. Unless the role of the virtual community is embraced by the members of the course teaching team, the community runs the risk of becoming yet another innovative but unopened learning resource, losing the contribution a virtual community can make to student learning. The influence of using of the community strategically during tutorials for discussion of course concepts and learning during student field study experiences cannot be understated and should form a central part of tutor orientation to the course. Commitment and use of the community needs to also be reflected in the practice of permanent or key teaching staff in the course (e.g. course co-ordinator), modelling its application to student learning and setting expectations about learning facilitation.

One of the challenges posed for the new curriculum and the new primary health care course was ensuring that learning about primary health care was not lost by students as they progressed through other courses in their degree. As a cross curriculum theme, primary health care understandings needed to be woven into following courses and strengthened as students develop more sophisticated understandings about health and illness. By continuing to use Wiimali in subsequent courses a community and primary health care focus to learning activities has been continued. Important to unfolding this approach across the three years of the curriculum has been the creation of learning materials that illustrate how community members reside in the community and enter the acute care system and pathways to returning to life as a community member. By using the same structure for the community map and adding new areas for subsequent courses, visual prompts which trigger reflection on past learning about primary health care are retained, and add to the way students are engaging and thinking about primary health care in ongoing courses.

Conclusion

Nurses are ideally placed to contribute to reform of the Australian healthcare system towards primary health care and to the health of communities (Eagar, Owen, Cranny, Thompson, & Samsa, 2008). Whilst there are already over 29,000 nurses employed in Australian primary health care settings (Australian Nursing Federation, 2011), further development of nursing roles and opportunities are needed in this sector to support the required shift in health system orientation to primary health care espoused by the national reform agenda (Keleher et al., 2007). Also of strategic importance is a workforce that understands the philosophy of primary health care and the social determinants of health and illness. To enable nurses to make this change and to achieve the required quality of health care service, nurses need to be prepared for practice in the primary health care sector rather than mainly the acute care system at under-graduate, postgraduate and continuing education levels. Embracing innovative ways of teaching are pivotal to facil-itating learning about primary health care and promoting interest in this area of practice. The use of virtual commu-nities which reflect social determinants of health and which are capable of being shaped to mirror real health services within communities are therefore an important develop-ment that has the potential to assist education providers to meet this educational need. Dialogue about innovative ways to enhance nursing student understanding of primary health care and research into the effectiveness of this approach are needed to inform ongoing changes to educational practice for nurses.

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Ethics approval

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