Co-developing and implementing a community nursing simulated learning resource for undergraduate nursing students

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Title: Co-developing and implementing a community nursing simulated learning resource for undergraduate nursing students.

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Aim: To describe the co-development and implementation of a pilot community nursing focused simulated learning resource within an undergraduate adult field nursing programme in Wales

Key Words Community nursing; simulation; undergraduate nursing; learning and teaching strategies; curriculum development; primary care nursing; simulated learning.

Abstract

Policy agendas across the developed world privilege systems transformation, notably shifting the balance of service provision from hospital to community settings. Primary and community health services have pivotal roles in the United Kingdom’s longstanding policy ambition of healthcare services transformation, and it is imperative that undergraduate nursing students comprehend community settings as valuable learning environments, places of care and community nurses’ roles therein. However, limited community placement learning opportunities means nursing students may be inadequately prepared to work in community settings at the point of initial registration.

High fidelity simulated learning is well established within undergraduate nursing curricula. Currently, this learning approach predominantly focuses on acute and secondary care nursing and takes place in simulation centres. Within undergraduate nursing curricula there is limited evidence to support that community-based simulation is utilised with the
result that students may struggle to recognise the value of learning opportunities in the community environment. This underpins the rationale for the development of this educational initiative which reflects current health policy agenda of care being provided closer to home. In addition, the new pre-registration ‘Future nurse: Standards of proficiencies’ (NMC 2019) acknowledge that registered nurses need to be able to care for people in their own home and in the community setting. This paper describes the co-development and implementation of a pilot, community nursing focused, simulated learning resource within an undergraduate adult field nursing programme in Wales, UK.

Tweetable Abstract

How one university co-developed and implemented a community focused simulation resource for undergraduate nursing students.

Introduction

Healthcare systems across the developed world continue to face considerable challenges associated with rising chronicity, changing treatment modalities, new technologies and ageing populations with complex, multiple morbidities, disabilities and increasing frailty. These challenges, which are growing with pace, are conjoined with ever increasing public expectations and juxtaposed against prevailing austerity (Amalberti et al., 2016; Welsh Government, 2015). To address current and future challenges facing healthcare systems globally, policy agendas across the developed world privilege systems transformation, notably shifting the balance of service provision from hospital to community settings: providing person-centred care and promoting independence and wellbeing in proximity to people’s homes (Edwards, 2014; Ham et al., 2017; World Health Organisation, 2017).

In the United Kingdom, primary and community health services have pivotal roles in the longstanding policy ambition of healthcare services transformation (Department of Health, 2009; Department of Health and Social Care and the Ministry of Housing, Communities and Local Government, 2019; Ham et al., 2012; NHS England, 2014, 2017; Welsh Government, 2018b). Community nurses are well placed to make a difference to the lives of some of the most vulnerable individuals and families within the communities they serve. Yet at the same time, and as budgets remain static, this policy agenda places
increasing demands on community health and nursing services (Welsh Government, 2018a, 2018b). Indeed, it is recognised that community nursing services in the United Kingdom and beyond are facing endless pressure as consequence of increasing complexity of patient case mixes, rising demand and bureaucracy juxtaposed against a declining workforce struggling with recruiting and retaining registered nurses and skill mix (Drennan, 2019; Maybin et al., 2016; Queens Nursing Institute, 2012).

The increasing importance of providing care in community settings conjoined with recognition of the need to raise the profile of community nursing career pathways (Health Education England, 2015) supports the imperative that undergraduate nursing students comprehend and appreciate community settings as valuable learning environments, places of care and community nurses’ roles therein. Furthermore, providing these nursing students with opportunities for stimulating, positive community nursing experiences may go some way to addressing the workforce predicament, particularly if viable professional development and progression opportunities are evident (Peters et al., 2015).

Undergraduate nurse education seeks to prepare nursing students to work across care settings as registrants (Nursing and Midwifery Council, 2018a, 2019). Evidence from international studies indicates that nursing students have valued community placements (see, for example, Peters et al., 2015). However, placement learning opportunities within community settings can be restricted and may not be prioritised (Byfield et al., 2019). Consequently, nursing students may be inadequately prepared to work in community settings at the point of initial registration (Albutt et al., 2013). It is therefore important that higher education institutions strengthen primary and community healthcare and nursing content in undergraduate nursing curricula, develop, implement and evaluate innovative learning and teaching strategies.

Background

Historically, nursing students have not fully recognised and appreciated the comprehensive learning opportunities community settings provide (Van Iersel et al., 2018). In part, this may be a consequence of the focus on acute, secondary care within contemporary undergraduate nursing curricula and the clinical simulation activities many students have been exposed therein. This does not reflect the reality of caring for
individuals, their families and significant others when home environments become the context of care (Herron et al., 2017). Furthermore, it does not recognise that to achieve the current health policy agendas across the United Kingdom’s four home nations (Department of Health Northern Ireland, 2016, 2018; Kings Fund, 2018; NHS England, 2014, 2017; Scottish Government, 2016; Welsh Government, 2015, 2018b), nurses are providing acute, complex care in peoples’ homes every day (Figure 1).

**PLEASE INSERT FIGURE 1 HERE**

Defined broadly, simulation is a practice that authentically mimics reality (Jeffries et al., 2015). As a pedagogical approach, simulation attempts to achieve a level of fidelity sufficient to convince users they are engaged in real life situations (Broussard et al., 2009). For many decades, nursing education has engaged with various forms of simulation to enhance and consolidate learning (Lejonqvist et al., 2016; Nehring and Lashley, 2009). With advancing simulation technology conjoined with widespread development of purposefully designed simulation centres to supplement learning in practice settings, the sophistication of approaches to learning by simulation has evolved with pace.

While there is a dearth of high quality, large-scale research, a plethora of international evidence suggests that learning by simulation may enhance nursing students’ knowledge, critical thinking, team-working, problem-solving, communication decision-making, self-efficacy and competence (Cant and Cooper, 2017; Lejonqvist et al., 2016). Furthermore, professional regulatory bodies internationally have recognised simulation as a viable substitute for clinical placements in undergraduate nursing programmes (NMC, 2010, 2018b, 2019). Accordingly, simulation is now an accepted integral educational strategy for nursing, widely incorporated within undergraduate nursing education worldwide (Cant and Cooper, 2017).

Simulation enables nursing students to rehearse, develop and learn within a safe, supported environment (Arthur et al., 2013; Berragan, 2011; Moule, 2011). It also provides students with opportunities to consider how it might ‘feel’ to be a nurse in practice (Berragan, 2011). Simulation education may also afford students the opportunity to consider their values and attitudes when faced with potentially personally challenging situations: for example, how a personal experience of breast cancer may affect interaction
with patients living with breast cancer. Nevertheless, the focus of simulation activities in undergraduate nursing programmes is often on aspects of acute, secondary care using advanced technology in the shape of computerized, whole body human patient mannequins within simulation centres designed to replicate acute care environments (Distelhorst and Wyss, 2013, Fisher and King, 2013, Green and Bull, 2014, Wheeler and McNelis, 2014). Furthermore, while there is an extensive body of literature and research on simulation in acute care settings, discourse and research surrounding community simulation initiatives is sparse (Green and Bull, 2014, Herron et al., 2017). Consequently, there is limited evidence to support the use of simulation to develop and build undergraduate nursing students’ knowledge, skills and self-efficacy in community nursing. However, Ooazageer et al. (2018) and Lubbers et al. (2017) both recommended that community simulation be explored and developed.

The integration of robustly designed, community focused simulation within undergraduate nursing programmes may facilitate the development of nursing students’ knowledge and understanding of caring for people in their own homes and the associated challenges (Distelhorst and Wyss, 2013). It may also go help build students’ self-efficacy and readiness to practice safely and effectively in community settings (Gibson et al., 2015). The aim of this paper is to describe the co-development and implementation of a pilot, community nursing focused, simulated learning resource within an undergraduate adult field nursing programme in Wales, UK.

**The Community Nursing Simulated Learning Resource: The innovation**

In response to student feedback on completion of community placements and community nursing university teaching, an innovative, community focused, simulated learning resource was co-developed with partner National Health Service University Heath Boards (Table 1).

**Please insert table one here Table 1: Engagement strategy**

**Innovation development**

The curriculum within which the simulated learning resource is located is underpinned by Bruner’s constructivist, spiral model (Bruner, 1966). This constructivist model suggests that students build knowledge and competence through drawing on
experiences and engagement with the environments where knowledge and skills are to be applied (Weeks et al 2019). Arguably this aligns with adult learning principles (Knowles 1983) and recognises the reservoir of experiences learners bring to the classroom.

Using an iterative, student-centred pedagogical approach, students, as active participants in their learning, develop and build on prior knowledge to inform future learning and generate change (Dewey, 1916). Indeed, Light et al. (2009) identified the importance of recognising the range of experiences students bring, suggesting these can be utilised effectively in simulated learning. Furthermore, providing students with opportunities to reflect on their clinical experiences with others, recognise and articulate the knowledge and skills they have developed and gain insight into how they are moving away from being a ‘novice’ towards becoming an ‘advanced beginner’ or even ‘competent’ (Benner 1984) can be invaluable (Hughes and Quinn, 2013).

The simulated learning resource aimed to facilitate consolidation and further develop second year undergraduate Adult Field nursing students’ community nursing knowledge for practice. It was important for us to ensure the simulated learning resource was underpinned by sound pedagogical principles (Arthur et al., 2016; Brown and Williams, 2015), supported the achievement of specific theoretical and practice module and programme learning outcomes, optimised scaffolding of student-centred learning, and coherently aligned with the curriculum (Biggs, 2003).

To begin, scenarios with a broad story outline and reflecting ‘typical’ District Nursing home visits were co-produced with our local University Health Board partners (Table 1). This ensured the scenarios appropriately reflected the changing demands of community practice and challenges facing community nurses (Box 1). Individuals in the filmed scenarios were representative of people who may be referred to the community nursing services due to a specific health need but, upon further holistic assessment may require a range of health and social care services and health promotion support.

Please insert Box 1 here : Scenario Exemplar

The learning activities connected to the scenarios were specifically co-designed to enable and support students to discover things for themselves and lead discussions and feedback. The learning activities focused on holistic assessment, safety assessment in the
environment, wound assessment and planning and prioritising care. This intentional focus was to support the module’s theoretical learning outcomes and also prepare students to meet the requisite second year summative practice learning outcomes identified in the All-Wales Practice Assessment Document and Ongoing Record of Achievement. This Wales specific document establishes what the public can expect nurses to know and be able to do in order to deliver safe, compassionate and effective nursing (Health Education and Innovation Wales 2018) and identifies the process by which student performance is measured against the Nursing and Midwifery Council (NMC) standards of proficiency (NMC 2018a).

A safe, non-threatening environment is a pre-requisite for learning to occur (Bland et al., 2011). While simulation is often perceived as ‘safe’ in that students can make mistakes within a controlled environment (Herron, 2017; Moule, 2011), students’ physical and emotional safety must be protected (Nursing and Midwifery Council, 2018b). There is a risk that when the context of care is the home setting, care provision can become much more emotionally challenging (Aldridge-Bent, 2013). We were mindful that the students could experience personal distress should scenarios focus on issues resonating with their own personal, familial experience. Responsibility for creating and maintaining a safe environment conducive to learning lies firmly with the facilitator (Hughes and Quinn 2013). Thus, to support this and set out the facilitator’s role in the simulated learning activities a set of facilitators’ guidelines was developed.

Once agreement had been reached regarding each scenario’s content, accompanying learning activities and the facilitators’ guidelines, the scenarios were role-played and filmed. Filming took place either ‘in the field’ or within the community flat facility within the University’s simulation suite. Filming in a ‘home’ setting and from the perspective of a nursing student accompanying a Registered Nurse enabled us to reflect the authenticity of community nursing visits and simulated learning experiences. In turn, this supported and enhanced the fidelity of a range of ‘real time’ community nursing visits rather than written case studies or scenarios that were presented to the students to ‘work through’. Students were encouraged to role play from the perspective of the student nurse in the filmed clips and consider decision making, assessment and nursing care in real time.

Please insert Table 2 here: Development of the Innovation
Innovation Implementation

The learning resource sought to enable students to recognise, make sense of and learn from community placements and build self-efficacy and readiness to practice safely and effectively in community settings. Thus, during implementation, learning was scaffolded by encouraging students to translate and build on past experiences in meaningful ways and facilitating their recognition of theory and practice links in the context of community nursing learning (Lubbers et al., 2017; Oozageer et al., 2018).

Two experienced lecturers with extensive community nursing expertise facilitated student learning using the community simulation learning resource with groups of thirty, second year nursing students in the University classroom setting during timetabled theoretical learning. The facilitators’ role was to pre-brief the students, act as a resource in terms of clinical expertise, guide and support the nursing students as they engaged with and completed the learning activities and debrief students.

To effectively engage students in the simulation learning experience, time was taken at the outset to pre-brief the students about the simulated learning resource. This was important for this was a new approach to simulated learning within our nursing programme. The pre-brief included clarification of the learning objectives, what was involved and what they might expect. Students’ prior experiences were acknowledged, simulation learning ground rules, for example, expectations of confidentiality and trust, were established and the scene was set (Chamberlain, 2015, McDermott, 2016, NMC, 2018).

As part of the simulated learning, students were provided with opportunities to complete relevant documentation to simulate a ‘real’ community nurse visit (see box 1) which included a wound assessment. This offered students a valuable opportunity to undertake and receive constructive feedback on a holistic patient assessment in a safe environment. Supporting students to complete documentation during simulation facilitates the link to nursing practice and is highlighted by the NMC code that registered nurses should keep clear and accurate records (NMC 2018c).

Experiential learning theory explores the process of learning through the transformation of experience (Kolb, 1984). This formed the basis of the de-briefing
approach. De-briefing was co-ordinated by the facilitator to allow students to reflect on the experience and evaluate the session. Essential learning takes place in the de-briefing phase of simulation-based experience and reflection can support participants to find a new interpretation in context of their previous and future experiences (Levett-Jones and Lapkin, 2014)

Evaluation

As with any new initiative aimed at enhancing education, assessing students’ views and determining if the identified outcomes have been achieved is vital (Light et al. 2009). Whilst evaluation might be considered research in its broadest sense (Parahoo 2014), influenced by level one of Kilpatrick’s model of evaluation (Kilpatrick and Kilpatrick, 2006), our primary aim was not to generate new knowledge but to obtain rapid insight into students’ initial reactions to the simulated learning resource to inform its ongoing development. Nonetheless, we were mindful of our ethical responsibilities to the students. No personal data were collected, and the ethical principles of beneficence, non-maleficence, autonomy and justice (Parahoo 2014) provided the foundation for the initial, rapid evaluation of this initiative.

To obtain insights into students’ initial reactions to the simulated learning resource rapidly, an internet-based programme specifically designed to analyse word frequency and present a visual summary of a body of text was employed (Heimerl et al., 2014). Whilst recognising limitations of these programmes, specifically the focus on word frequency and loss of context (Gill and Griffin, 2010), the potential for using this technique for preliminary analysis of textual data was asserted by Osbourne et al. (2012). Visual summaries of text, commonly known as ‘word clouds’, ‘tag clouds’ or ‘content clouds’, are increasingly popular in many areas including marketing, medical research and education. Indeed, in education word clouds have been used as pedagogical tools to communicate ideas, stimulate thought, discussion and reflection (Viegas et al., 2009; Williams et al., 2013) and assess learning (De Paolo and Wilkinson, 2014, Philip, 2019). Certainly, word clouds may be used to quickly illuminate key themes within a defined textual data set or even draw attention to aspects which may warrant further exploration.

Several different internet-based programmes which generate word clouds from metadata are freely available. These easy-to-use sites include Tagcrowd (Steinbock, 2008)
and WordArt. Each programme has its own strengths and limitations. Created by Steinbock (2008), the TagCrowd application offers users the opportunity to generate a tag cloud either by pasting in text or uploading files (Cidell, 2010). Furthermore, it incorporates words with the same stem as one entry (Cidell, 2010). Osbourne et al. (2012) argued that TagCrowd is particularly useful for handling large sets of qualitative data. By way of contrast, WordArt encodes and presents information about word frequency via the font. Yet unlike tag clouds, which typically present text in static, linear, alphabetical format, WordArt has an aesthetic dimension, for its output employs a kaleidoscope of rich graphic possibilities.

On completion of the simulated learning resource, students \( (n=176) \) were invited to provide anonymous, brief written feedback on yellow sticky notes on the following aspects: overall impression of the simulated learning resource; the learning activities and content they perceived to be most valuable and what they felt could be developed and enhanced within the simulated learning resource.

Students generated 165 comments. The number of words for each comment ranged from 1 to 36. For each aspect, comments were collated and transcribed into four separate Word documents. The text in each document was then prepared for preliminary analysis by removing personal pronouns, frequently occurring link words, for example, ‘to’, ‘and’ ‘be’, ‘a’, ‘of’ and ensuring consistency in the use of capital across the data set. The four Word files were then converted to word clouds using the internet-based programme WordArt.

**Findings**

Figure two displays the word cloud generated from the students’ comments about the overall impression of the simulated learning resource.

**Please insert figure 2 here**

Forty-three words were generated. The three most frequent words were “Useful” \( (n=7) \), Helpful” \( (n=6) \) and “Enjoyed” \( (n=5) \). No words with negative connotations were present.

**Please insert Figure 2 : Students overall impression**

Figure three displays the word cloud generated from the students’ comments about the learning and teaching activities embedded in the simulated learning resource.
Please insert figure 3: Figure 3 Students’ views

Eighty words were generated. Here the three most frequent words were “Scenarios” (n=15), “Videos” (n=11) and “Group Discussion” (n=7).

Figure four displays the word cloud generated from the students’ comments about the content of the simulated learning resource.

Seventy-five words were generated. The three most frequent words were “Community” (n=16), “Assessing” (n=12) and “Wound care” (n=5).

Please Insert Figure 4: Students’ perspectives

Figure five displays the word cloud generated from the students’ comments relating to the ways in which the simulated learning resource may be developed and enhanced.

Please Insert Figure 5: Development and Enhancement

Forty-two words were generated. The most frequent word was “More” (n=16). Primarily this related to content. It was evident that students desired more in terms of scenario learning (n= 5). However, feedback also indicated they desired more “Community” (n=2) focused content, specifically a range of aspects relating to wound care and at an earlier point in their programme of study.

Discussion

The word clouds communicated ideas and visualised common themes articulated by students. Student feedback highlighted that they enjoyed and valued engaging with the simulated learning resource. The importance of student engagement and perceptions of ‘enjoyable’ learning can be linked to confidence building and supporting students to engage in different ways. Growing evidence relating to the positive impact of community simulation, reflects high student satisfaction, self-confidence (Cant & Copper 2010, Distelhorst & Wyss 2012, Lubbers & Rossman, 2017, Herron et al., 2017, Hoffman et al. 2020) and assisting in students connecting their simulated experience to safe and effective community nursing practice (Green and Bull, 2014, Herron et al., 2017, Oozageer 2018). Active involvement of students to facilitate the learning environment reflects the
humanistic approach (Rogers, 1983) and highlights how low fidelity community simulation can enhance aspects of the student nurse experience in linking theory to practice.

Students’ perspectives on content were focused on assessment, community and wound care. This incorporates the learning outcomes for the relevant theoretical module which focused on holistic assessment, this was clearly reflected in the community simulation and supported students developing and consolidating skills in relation to assessment in the home environment. This demonstrates the essential role of simulation in providing theoretical and clinical components to enhance and consolidate learning (Lejonqvist et al., 2016; Nehring and Lashley, 2009).

Student comments indicated a desire for ‘more’ community simulation. This can be viewed positively and generates discussion about further evolvement of the simulated learning resource. The central role of the scenarios is key in relation to enhancing the simulation and provides evidence for further consideration of developing new scenarios to reflect student feedback. The realistic nature of each simulated ‘visit’ facilitated students to engage as they would in clinical placement, considering what they have learnt and incorporating theory and practice in preparation for future nursing practice. In terms of improvement the quality of the filming could be addressed as well as how all simulated films could take place in ‘homes’ rather than in recognizable environments. However, this is a small consideration when reflecting on the learning resource.

**Conclusion and implications for practice**

The co-produced simulated learning resource described here sought to simulate the ‘real world’ of community nursing. Community focused simulation can facilitate students’ sense-making of prior community nursing experiences, integrate theory and practice and potentially influence future learning and patient care. Initial feedback indicated that students enjoyed the learning resource and found it useful and beneficial. Arguably this could potentially enhance confidence and reinforce learning in context of future community nursing practice. The importance of briefing students to promote role playing as an educational strategy is fundamental for simulation to maximise learning. In addition, debriefing, where students can ‘make sense’ of the experience to support future learning is essential. Promoting community nursing through simulated education within the
undergraduate nursing curriculum may also raise the profile of community nursing career pathways and support future workforce planning for community nursing (Health Education England 2015, WG).

Declaration of Interest
Dr Tessa Watts is a member of the editorial board of Nurse Education in Practice.

References


Health Education and Improvement Wales All Wales Practice Assessment Document and Ongoing Record of Achievement (2018), pp. 1


Rogers, C., 1983. Freedom to Learn for the 80s. Merrill, Ohio


**Fig. 1: Community placement learning opportunities (adapted from Aldridge-Bent 2013)**
Table 1: Engagement strategy

<table>
<thead>
<tr>
<th>Engagement Strategy</th>
<th>Activity Details</th>
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<tbody>
<tr>
<td>Local University Health Board</td>
<td>Practice Development Nurse To discuss current District Nursing Team structures and local policy agenda</td>
</tr>
<tr>
<td>District Nursing Team Leaders</td>
<td>Practice Education Facilitator To gain perspectives of District Nurses’ supporting students</td>
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<td></td>
<td>To understand mentor support and development in the community setting</td>
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<tr>
<td>Higher Education Institution</td>
<td>Students</td>
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**Highlights**

The implementation of a co-developed community simulation resource provided an opportunity for students to experience the ‘real world’ of community nursing in a safe supportive environment.

Support students to build upon prior learning and facilitate future active learning in a community setting.

Highlighting the importance of integrating theory with practice in the context of care delivery in the community.