Development of a curriculum for advanced nurse practitioners working with older people with frailty in the acute hospital through a modified Delphi process

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Abstract

Background: advanced nurse practitioners (ANPs) are experienced nurses who undertake some activities traditionally performed by medical staff. There are four pillars of advanced practice: advanced clinical skills, leadership, education and research. ANPs are starting to specialise in the management of older adults with frailty in the acute hospital. However, the role and competencies required for this have not been well defined. This study aimed to establish an expert consensus on the role description and essential competencies for ANPs working with older people with frailty to develop a curriculum.

Methods: a literature review and workshops including multi-professional and lay representatives generated a role description and a list of 69 competencies. A modified Delphi process was then conducted with three rounds involving a panel of 31 experts including representatives from the RCN, BGS Education and Training Committee, BGS Senior Nurses and Practitioners Group, Chartered Society of Physiotherapy Older People Network, College of Occupational Therapists Older People Specialist Section and lay representatives. Consensus on the statements was established by 70% panel agreement.

Results: the role description reached 100% agreement within three rounds. Twenty-five essential competencies were agreed after Round 1, increasing to 43 after Round 2 and 49 after Round 3.

Conclusion: this Delphi study has allowed, for the first time, a national panel of clinical experts and lay representatives to refine and agree a set of competencies for ANPs working with older people with frailty. It is the first step towards ensuring consistency in the training of ANPs in geriatric medicine.

Keywords: advanced nurse practitioners, aged, Delphi technique, curriculum, frail older person

Background

Older people occupy two-thirds of acute hospital beds in the UK National Health Service (NHS) [1]. Many older people experience frailty. There is no international consensus on frailty, but one definition is ‘a clinically recognisable state of increased vulnerability resulting from ageing-associated decline in reserve and function across multiple physiologic systems such that the ability to cope with every day or acute stressors is comprised’ [2]. Frailty is predictive of increased mortality, and end-of-life issues are common [3]. Comprehensive geriatric assessment (CGA) involves the assessment of an older person with frailty over five domains (physical and mental health, functional ability, social support and environment), to inform a plan of care that improves patient outcomes [4]. CGA increases patients’ likelihood of being
alive and in their own homes after an emergency admission to hospital [5]. With the high prevalence of older people in hospital, clinicians need to be skilled at facilitating CGA, but there are insufficient medical doctors with these skills and it is unlikely that this situation will improve in the near future [6]. Empowering nurse practitioners to develop specialist skills in the diagnosis and management of older people with frailty is one possible solution. These nurses are called advanced nurse practitioners (ANPs). There are many nursing roles described as ‘advanced’ [7], but in this article, ANP is used to describe nurses who make professionally autonomous decisions, receive patients with undifferentiated and undiagnosed problems and by making an assessment of their healthcare needs arrive at a differential diagnoses using decision-making and problem-solving skills. They can order and interpret tests and procedures, prescribe and discharge patients [8]. In addition to clinical work, their role should include management or leadership, education and research or service development [9]. In the USA, geriatric nurse practitioners are established in NICHE (Nurses Improving Care for Healthsystem Elders) hospitals where they work to a nationally agreed curriculum and study to master competencies needed for ANPs specialising in working with older people with frailty [10]. In the UK, ANPs are increasingly working in the acute hospital in areas that specialise in the management of older people with frailty [11]; however, the nursing role description and competencies required to work in these areas have not been formally defined [12, 13]. Lack of a clear role description can cause problems including ANPs working in accordance with their own individual interests rather than to a strategic plan for care delivery, working beyond their level of competence or becoming overloaded with work [14].

This study sets out to establish consensus, among UK experts in the health care of older people, on the role and competencies needed for ANPs specialising in working with older people with frailty in the acute hospital.

**Methods**

The Delphi process is a consensus method that aims to determine the extent to which experts or lay people agree about a given issue [15]. This study used a modified Delphi process where an initial role description and a comprehensive list of potential competencies were established following a literature review and focus groups. These were presented to an expert panel for consideration in three rounds.

**Preparation for Delphi process**

A literature review was performed to identify available curricula related to specialist geriatric and ANPs. The Medline database and Google search engine were searched using the terms ‘Advanced Nurse Practitioner’, ‘Geriatrics’ and ‘Competencies’. Seven curricula and competency statements were identified [8, 16–21]. Alongside the literature review, four focus groups were held comprising consultant geriatricians, senior nurses from older person wards, allied health professionals (with expertise in working with older people with frailty) and members of a dementia and older person patient and public advisory group. Focus groups lasted 30–60 min and were facilitated by S.G. Participants were asked to discuss the breadth and depth of the role of ANPs in caring for older people with frailty and the competencies they would expect ANPs to have. Potential competencies and important aspects of the role were recorded in writing. Conversations were digitally recorded to support understanding of the written information.

A list of competencies was first developed through an iterative mapping exercise, where each curriculum was reviewed in turn to identify learning outcomes. This produced a list of 251 competencies, with much overlap. Without losing any domains and through careful combinatorial wording, this was reduced to a list of 69 competencies. The data from the focus groups were then mapped to this list with further refinement being made where necessary. The competencies were referenced to sources and used to create a first draft role description. The role description and competencies were reviewed for completeness by the study management group. They were then reviewed by the BGS Education and Training Committee (ETC) by way of expert judge content validation before being sent to the Delphi panel, and their suggestions were incorporated. Further potential competencies were identified by participants during the first round of the Delphi study.

**The Delphi process**

**Participation and recruitment**

A national panel of experts was formed. To reflect the complexity and variety of expertise involved in caring for older people with frailty, a purposive sampling strategy was used to recruit the panel. An expert was defined as a registered clinician with >5 years’ experience working with older people with frailty, or a lay representative with an interest in and experience of the health care of the patient cohort. Experts were invited from specialist professional groups (the BGS, including members of the ETC and the Senior Nurses and Practitioners group; the Chartered Society of Physiotherapy Older People Network-AGILE, the College of Occupational Therapists Older People Specialist Section and the Royal College of Nursing). Lay representation came from Collaborative for Leadership in Applied Health Research (CLAHRC) East Midlands. In total, 34 experts were invited to take part by email and provided with a participant information sheet.

Emails were sent to participants individually to ensure anonymity. Participants were given 3 weeks to respond, with reminder emails sent weekly. If a participant had not completed the round at this point, with no contact with the researchers, they were excluded from further rounds of the process. To ensure strong retention of expert involvement, an upper limit of three rounds of investigation was set in this study [22].
Each questionnaire consisted of a series of competencies which the respondent could rate as ‘essential’, ‘desirable’, ‘not necessary’ or ‘modifications needed’. In the first round, respondents were also asked whether additional competencies were required. For the role description, each respondent was asked whether they agreed with it or whether modifications were needed.

The Delphi process is an iterative process that uses repeated communication to refine expert opinion on the topic and move towards an accepted level of agreement. After each round:

- A summary of the panel scores was presented for each competency and the role description.
- Any statement that reached consensus was removed from further rounds.
- Some participants agreed statements, but at the same time suggested changes to the wording of the text. Statements where over 70% agreement were reached were modified where the free text comments indicated this was appropriate. Where modifications were minor (i.e. to add clarity to the competency or use of more precise language), the amendments were highlighted; however, the panel was not asked to rescore. Other modifications were considered major, and the panel was asked to rescore.
- New statements were formulated based on comments made.
- Competencies were combined or separated based on suggestions given. Where each individual competency reached consensus, combined or separated competencies were not rescored.

Between each round, the study management group reviewed the new list of competencies and role description. There is no universally accepted threshold for defining consensus as part of the Delphi process. Consistent with other studies, consensus was considered to have been reached when there was ≥70% percentage agreement as ‘essential’ between the panel members [23].

Research ethics committee approval was obtained.

Results

Round 1

The questionnaire containing potential competencies was sent in July 2014, and 31/34 participants responded by August 2014. Following Round 1, 29/69 competencies were fully agreed as essential and 2 competencies were partly agreed as essential; 38/69 did not reach consensus. Comments identified competencies that required rewording or restructuring or which were repetitive or implicit in another competency. Additional competencies were suggested. This led to a reorganisation of the competencies resulting in a total of 25 agreed competencies and 38 competencies that needed re-presenting to the panel for re-scoring (see Figure 1 for flowchart of agreement of competencies).

Round 2

The 38 competencies were sent to 31 panel members in August 2014; 27/31 members completed the exercise. All

Figure 1. Flow chart of agreement of competencies.
would be able to initially manage.

List of 18 acute and 28 chronic conditions that the ANP re-scored by the panel, including within one competency a agreed as essential and 20 competencies needed to be during Rounds 1 and 2. A list of potential conditions was included to be scored individually. The conditions included in the list were identified from the literature review, the focus groups, the study management group and suggestions of participants during Rounds 1 and 2.

Following Round 2, a total of 43 competencies were agreed as essential and 20 competencies needed to be re-scored by the panel, including within one competency a list of 18 acute and 28 chronic conditions that the ANP would be able to initially manage.

Round 3
Twenty competencies were sent in September 2014 to 28 panel participants. All 28 completed the questionnaire by November 2014. Six competencies reached consensus as essential. Seven competencies reached consensus as ‘not essential’. Overall, this resulted in 49 competencies agreed as essential (Figure 1; Supplementary data, Table 1, available in Age and Ageing online). Seven competencies and 13 conditions were agreed by more than half the panel as essential, but did not reach the 70% threshold. Fourteen of the acute and 17 chronic conditions that the ANP would need to initially manage reached consensus as essential.

Curriculum for ANPs working with older people

Role description

Round 1
Twenty-two respondents contributed to the development of the role description; 8/22 agreed the role description; 14/22 asked for modifications. Common themes included the role being too senior and too broad in scope of responsibility. The role description was reworded in response to these comments.

Round 2
The panel was asked whether they wanted two additional statements included in the role description. The first of these concerned the provision of education or information to older people with frailty, or their carers, on the frailty trajectory and how frailty can be prevented and managed through self-management and the health care provided. The second considered whether the role should include ANPs developing specialist expertise in interpreting atypical presentations of illness in older people and detecting treatable acute conditions that may not be immediately obvious, for example sepsis, stroke or fractured neck of femur.

Consensus was reached that both the additional statements should be included and the role description was rewritten accordingly.

Round 3
The role description reached 100% agreement (see Box 1).

Discussion
Through a modified Delphi process, a panel of UK experts reached consensus on 49 competencies and a role description for ANPs caring for older people with frailty in the acute hospital.

Box 1. Role Description

Advanced Nurse Practitioners for older patients with frailty (ANPs) are senior nurses with advanced clinical skills who work in the acute hospital in collaboration with the multidisciplinary team, mental health, social care and community services, patients and their carers. They work with a high degree of autonomy and self-direction but always with a consultant geriatrician who the ANP can refer to for advice and who they work alongside in a mutually supportive role.

ANPs support the comprehensive geriatric assessment process, providing expert care for older patients who have acute physical illness combined with other problems (examples include co-morbidities and needs relating to their mental health (including behavioural and psychological problems such as agitation or apathy), functional abilities and rehabilitation, social and physical environment). They perform activities traditionally undertaken by medical staff including physical examination, ordering and interpreting diagnostic tests, advanced health needs assessments, assessment of patients with cognitive impairment, differential diagnosis, prescribing medication, care planning and co-ordination of patient discharges. They have the ability to interpret atypical presentations of illness of older people, detecting treatable acute conditions which may not be immediately obvious, e.g. sepsis, stroke or fractured neck of femur.

They are able to identify and meet the educational and information needs of patients and carers including providing information for the patient and their carers on what frailty is, the frailty trajectory and how frailty can be managed in terms of self-management and healthcare provided, paying special attention to the propensity to crises and limitation in function of the older person. ANPs are trained in advanced communication skills and are able to communicate effectively with patients and carers/relatives in difficult situations with the skills and understanding to communicate with people with cognitive impairment. As clinical leaders, they role model best practice and individualised person centred care and are a source of expert knowledge for individual staff and clinical teams, providing education and development opportunities both in practice and formal settings to ensure quality of care is maintained. They aim to continuously improve the way care is provided for older people with frailty by supporting clinical governance, research and innovation.
The strength of this study is the use of the modified Delphi technique. The anonymity of the panel members avoided issues of group conformity and prevented influences of dominant personalities, prestige and politics [22]. The staged approach of the Delphi process is another advantage. Since a number of rounds are employed, it allows the panel members to reflect upon and adapt their opinions over time, facilitating consensus. The use of controlled feedback in which the individual panel members received a summary of the results of previous rounds helps to reduce ‘noise’ in the results and the process of convergence towards consensus.

A potential limitation to the Delphi technique is researcher influence on the formulation of the initial statements. However, to minimise this risk, we based initial statements on a review of previous literature as well as the opinion from workshops conducted with a multidisciplinary group of clinicians and lay representatives. This literature review was not however systematic, and it is possible that important competencies were missed; however, the BGS ETC and Delphi panel members were given (and took) the opportunity to suggest additional competencies. Another possible limitation is that members of the panel may have scored competencies according to their own individual interests; however, panel members were largely selected from groups or committees with a special interest in the health care of older people giving them a broad perspective on the needs of older patients living with frailty.

The initial competencies and role description sent to the panel were by many considered too broad. The panel still agreed as essential 49 competencies and a further 7 were agreed as essential by between half and 70% of the panel. This shows a potential limitation of the Delphi process which may not address the issue of what is ‘too much’ in terms of competencies or risk of overloading with work. Further discussion is needed in this area.

Research activity was a major area included in the initial set of competencies which was initially considered not essential by all doctors and 50% of nurses on the panel. Further rounds resulted in less panel members scoring research as essential. This may reflect the urgent clinical need for practitioners delivering direct patient care, but is contrary to the requirement of Advanced Clinical Practice posts which should contain a minimum level of each of the four pillars of advanced practice: clinical, research, education and leadership [24, 25] and falls some way short of the requirement for geriatricians in training who are expected to be competent in basic research methodology, ethical principles of research, comprehensive scrutiny of medical literature and preferably to have personal experience of involvement in basic science or clinical (health services) research. Whether a two-tier system of research competencies, with doctors skilled but ANPs unskilled, is appropriate for a patient cohort where research and development is likely to be framed in multidisciplinary terms is open to challenge. How it is practicable for ANPs to become engaged in research could represent particular focus for future iteration of the competencies.

Conclusion

This Delphi study has allowed a UK panel of clinical experts and lay representatives to refine and agree on a set of competencies for ANPs working with older people with frailty. It represents an important step towards developing an agreed curriculum for the training of ANPs in geriatric medicine across the UK. It will give clinical services the framework to ensure ANPs working with older people with frailty are competent in the essential skills, and their role is clearly defined. At a national level, it may provide consistency in standards across the country.

Key points

• Competencies for ANPs managing older people with frailty in the acute hospital have not been well defined.
• Using a modified Delphi process, a multi-professional and lay panel of experts reached consensus on 49 essential competencies.
• This is the first step towards ensuring consistency in the training of ANPs in geriatric medicine.

Supplementary data

Supplementary data mentioned in the text are available to subscribers in Age and Ageing online.

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Conflicts of interest

None declared.

References


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