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Enhancing ward rounds for older patients with frailty: a modified Delphi process

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Abstract

Background Despite their prevalence, ward round practices are not well described, leading to challenges in achieving proficiency. We aimed to identify consensus-based content items for conducting ward rounds with older patients with frailty to provide clearer guidelines and enhanced understanding of best practices for medical professionals.

Methods A nationwide Danish five-round Delphi study was conducted during 2023. Geriatric medicine (30) and medical communication (5) experts were invited to participate. The participants' comments and an iterative thematic approach were used to identify and refine content items and themes, after which participants assessed items for consensus. Consensus was defined as 75% of participants voting 7–9 on a 1–9 Likert scale. Items without consensus returned to the next Delphi round with elimination if no consensus was reached after the second assessment.

Results Delphi study response rates were 26(74%), 21(81%), 18(86%), 13(72%), and 11(85%) in Delphi rounds 1–5, respectively. Experts reached consensus on 108 content items on conducting ward rounds with older patients with frailty. Items were organised into four themes: (1) preparing ward rounds, (2) conducting ward rounds, (3) competencies, (4) circumstances related to the patient group. Ward round preparation and the conduction of ward round detailed the process of managing older inpatients with frailty, including conducting a holistic review of patient history and functional status, as well as improving the environment, such as by reducing noise. Competencies and patient circumstances related to the patient group included knowledge, skills, and attitudes to improve ward round quality, including flexibility in terms of reading patient cues and adjusting content to changes in cognition and alertness and knowledge on how to communicate with patients living with cognitive impairment.

Conclusions Geriatric medicine and medical communication experts reached consensus on 108 content items for conducting ward rounds with older patients with frailty. The items were grouped into four themes: preparing for ward

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rounds, conducting ward rounds, required competencies, and patient-related circumstances. The authors believe that this study serves as a valuable resource for medical training and future research.

Keywords Continuous professional development, Ward rounds, Geriatric medicine, Frailty, Curriculum development, Delphi methodology

Introduction

Ward rounds are essential for clarifying diagnoses, coordinating management plans, and monitoring patient progress during hospitalisation [1]. They also establish patient and team goals, plan discharges, and educate healthcare professionals (HCPs) [1]. A patient-centred approach is preferred to ensure patient involvement and shared-decision making [2]. The skills required for effective inpatient care are integral to medical education, but conducting ward rounds is not clearly defined, making it difficult to teach and incorporate into curricula [3, 4].

Hospitalised older patients are increasingly complex due to rising levels of multimorbidity, polypharmacy, and frailty [5, 6]. Despite its recognised importance, managing frailty during ward rounds is challenging, even in medical education in general [1, 7–10]. Frailty, an age-related syndrome characterised by a functional decline in physical, cognitive, and social domains, complicates ward rounds [11]. Patient deterioration, such as delirium or fatigue, challenges communication and patient involvement [7, 12, 13]. Additionally, the nonspecific and subtle symptoms common in this population can make it difficult to identify complaints, potentially leading to misdiagnoses and extended hospital stays [14, 15].

To address these challenges effectively, ward rounds for older patients with frailty must involve collaborative, multidisciplinary, and profession-specific medical assessments, as well as tailored care plans [6]. As the number of older inpatients with frailty rises, there is a need for a collective responsibility for their care [16–18]. Overall, conducting ward rounds for patients with frailty is a complex and frequent task, but inadequate education can lead to improper care for older patients with frailty [19]. Therefore, the purpose of this study was to identify key items for curriculum development on conducting ward rounds for this patient group.

Methods

We applied a modified Delphi methodology to achieve expert consensus on the best practices for conducting ward rounds with older patients with frailty [20, 21]. The process comprised two parts: a focus group interview and a Delphi study conducted from January 2023 to June 2023. We opted not to specify a fixed number of rounds, thereby modifying the traditional Delphi process of three rounds [22]. Following Kern's six-step approach to curriculum development, this study offered a both a general and targeted needs assessment, and further, insights

goals and objectives to improve ward rounds (steps 1 to 3) [23].

Study participants

Focus group participants were geriatric doctors with expertise in communication. They were peer-nominated by members of the Danish Geriatric Society and included via convenience sampling. Delphi study participants included geriatric medicine and medical communication experts. Geriatric medicine experts included key opinion leaders, such as medical directors and clinical leads, from all departments with geriatric medicine in Denmark [21]. Medical communication experts were contacted via email and asked to nominate peers. Work experience in the field of study served as a proxy for expertise, and we invited participants with at least five years of field experience [24]. We decided to include 35 participants for the Delphi study to ensure a broad range of perspectives and experiences [25, 26]. Five focus group participants were also invited to the Delphi study. The authors did not participate in any of the processes.

Preparing the Delphi study

A focus group interview was conducted to design the initial round of the Delphi study. The focus group interview was held online for convenience and to secure multiple site attendance. Focus group participants were asked to describe the ward round, competencies needed for undertaking ward rounds, and special circumstances related to older patients with frailty. Participants were asked to be as specific and operationalizable as possible. Medical communication experts were not included in the focus group as these interviews focused on ward round structure and content. The experts were included at the next stage of the Delphi study to refine findings with broader perspectives. The semi-structured interview guide can be found in Additional file 1. The focus group meeting was audio recorded, transcribed verbatim, and inductively coded using NVivo software [27]. The thematic analysis identified overarching themes, which informed the development of the open-ended questions in Delphi Round 1 [28].

The Delphi study

The five-round Delphi study aimed to generate consensus-based content items for conducting ward rounds with older patients with frailty. Frailty was defined using the Clinical Frailty Scale, where a score of 5–8 indicate

Table 1 Study participants

		Focus group interview <i>n</i> = 8	Delphi study expert panel <i>n</i> = 35
Peer nomination, <i>n</i>	Geriatric Medicine	18	-
	Medical Communication	-	5
Experts in, <i>n</i> (%)	Geriatric Medicine	8 (100)	30 (86)
	Medical Communication	-	5 (14)
Gender, <i>n</i> (%)	Female	5 (63)	23 (66)
	Male	3 (37)	12 (34)
Workplace, <i>n</i> (%)	University hospital	5 (63)	9 (26)
	Regional hospital	3 (37)	23 (66)
	Other		3 (9)

varying levels of frailty [29, 30]. Questions for each round can be found in Additional file 2. Delphi rounds were conducted via email, and participants were given two weeks to respond. Reminders were sent to maximise participation. Proceeding to the next round required a response rate of >60% of the panellists who participated in the preceding round. Only participants who completed the previous round could participate in the proceeding Delphi rounds. In accordance with previous Delphi studies, consensus was defined as >75% of participants responding '7–9' to a content item [31]. Items reaching a consensus level below 75% after the second rating were eliminated [31].

Round 1: identifying content items

Round 1 contained six open-ended questions to facilitate a brainstorming phase. Questions covered ward round preparation, conduction, and follow-up. Questions also encompassed competencies required and challenges met during ward rounds. Lastly, participants were asked to list competencies that physicians in training should practice when conducting ward rounds. Using an inductive, thematic approach, all responses were analysed and organised into themes, sub-themes, and content items by authors LA and RD [28].

Rounds 2 and 3: refining content items

Rounds 2 and 3 refined the identified content items from previous rounds. Therefore, each participant had to decide if every content item was adequately described and operationalizable. If not, participants could suggest alternations and were also allowed to add new content items. The refinement process was split into two rounds to reduce participant workload in Round 2, although this resulted in an additional Delphi round. Authors LA and RD revised content items with respect to participant comments and removed items due to merging or redundancy.

Table 2 Response rates per Delphi round

	Round 1	Round 2	Round 3	Round 4	Round 5
Surveyed participants, <i>n</i>	35	26	21	18	13
Responded, <i>n</i> (%)	26 (74)	21 (81)	18 (86)	13 (72)	11 (85)
Geriatric Medicine experts, <i>n</i> (%)	24 (92)	19 (90)	16 (89)	12 (92)	10 (91)

Round 3 to 5: Building consensus

In rounds 3–5, participants were asked to build consensus on refined content items by rating items on a 1–9 Likert scale from 1 being 'Not relevant' to 9 being 'Should be included in the curriculum'. Participants were encouraged to clarify or qualify their responses. Participants could provide additional comments or add content items. Items without consensus returned to the next round with the participants' score, the average agreement score, and the interquartile range.

Results

A total of 8 experts participated in the focus group preparing the Delphi Study and 35 experts were invited to participate in the Delphi study (See Table 1 for participant demographics). Medical communication experts included three consultants in non-geriatric fields, one nurse, and a professor in medical communication with a PhD in medical education. The response rates for each Delphi round appear from Table 2, illustrating a decline in the number of participants from 35 in the first round to 13 in the final round. Reasons for non-response were not formally investigated, and as mentioned in the Methods section, only participants who completed the previous round could participate in the proceeding Delphi rounds.

Generating content items, sub-themes, and themes

Participants generated 129 content items, of which 68 were revised, and 11 were removed due to merging or redundancy. After Round 1, content items were categorised into four overall themes and 22 sub-themes, illustrated in Table 3. Participants proposed no extra themes or sub-themes after Round 1.

Rating content items

First rating of 118 content items included 98 (83%) items. Second rating of 20 content items included 10 (50%) items. Details regarding refinement and the rating process can be found in Additional file 3. The mean rating scores of all content items were 7.0 (of 9.0), with a range of 4.2–9.0. On average, participants placed 2.6 comments pr. content item (ranging 0–14), and Additional file 4 illustrates the data analysis and revision of a content item. In total, 108 (91%) content items were included.

Table 3 Themes and sub-themes generated from round 1 responses

Themes				
	Preparing ward rounds	Undertaking ward rounds	Competencies	Circumstances related to the patient group
Sub-themes	Current patient state Previous conditions and hospitalisations Treatment and examination planning Patient preparation Interdisciplinary collaboration Settings	Introduction Negotiating agenda Shared decision making Summarising and closing Short- and long-term planning	Adjustment of language to meet patient needs Management of meetings and prioritisation Flexibility Building relationship Credibility/reliability Patient involvement	Patient characteristics Ward round characteristics Patients with cognitive impairments Patients with delirium Relatives/informal caregivers

Additional file 5 contains the entire list of content items included.

Discussion

Based on expert consensus on the best practices for conducting ward rounds with older patients with frailty, four overall themes were identified: Preparing ward rounds, undertaking ward rounds, competencies, and circumstances related to the patient group. Our study addresses a common healthcare activity, and some findings may be generalised to all patients, while others are specific to the unique characteristics of older patients with frailty.

Ward round Preparation

The theme of ward round preparation included a holistic evaluation of patient history, including functional status and medication reviews, and a reflection on how to optimise ward round settings, such as recognising the need for hearing aids and relatives' support. What differentiates our results from other patient groups are the additional focus on the patient's functional level prior to admission, the advanced directives, and the assessment of whether the patient will benefit from intensive care treatment. Our findings support the multidimensional and interdisciplinary process of Comprehensive Geriatric Assessment (CGA). CGA is a well-established tool for managing older admitted patients with frailty [32]. Ellis and colleagues described CGA as “the cornerstones of modern geriatric care” [33]. In addition to the CGA, our study participants highlighted the importance of optimising hospital environments, such as emphasising noise reduction, which may lead to improved overall health with aging [34].

Undertaking ward rounds

Several elements, such as negotiating the agenda, shared decision-making and picking up cues, align with principles in the Calgary-Cambridge guide, a framework for core communication used to structure and assess communication skills between HCPs and patients [35]. The content item, “Ensure that the assessment of caregivers and therapists is included in the joint care plan decided

during ward rounds” underlines the multidisciplinary and integrated care, supported by health policies worldwide [36, 37].

Competencies

The subtheme, “Adjustment of language to meet patient needs” aligns with other studies on communication with patients in general [38, 39]. Our study emphasised the necessity of tailoring communication to accommodate the cognitive and emotional capacities of this patient group. Participants in the Delphi study highlighted the critical role of clear, empathetic, and accessible language in fostering patient understanding and involvement. These adjustments in communication are fundamental to delivering high-quality, patient-centred care during ward rounds [40]. The content item, “Keeping agreements, including not promising things you cannot keep, e.g., coming back later in the day” addresses the issue of trust, which is particularly important to older patients [41]. Gaffney and Hamiduzzaman (2022) highlight that how patients see the credibility and trustworthiness of healthcare professionals affects a lot their willingness to talk and participate in clinical communications [42]. Similarly, the content item, “Being realistic on behalf of the patients, but not draining the patients' hopes and showing respect for the patients who want to maintain hope” applies a universal principle. However, older patients might experience higher rates of hopelessness, a factor associated with adverse outcomes [43].

Circumstances related to the patient group

Previous studies suggest that relatives play a substantial role in older patients with frailty admitted to hospital [44, 45]. The sub-theme, “relatives/informal caregivers”, handles the complex process of conducting ward rounds while keeping not only the patient's needs in mind. It emphasises respecting confidentiality, aligning perspectives with the patient, and sensitively addressing emotional reactions and family dynamics. Neither the Calgary Cambridge guide, nor the CGA, as previously mentioned, include relatives' significance [32, 46].

Focusing on the patients' deficiencies tends to perpetuate stereotypes of frailty and dependency and could lead to ageism [47]. Ageism, which is prejudice or discrimination on the grounds of a person's age, could lead to adverse outcomes [48]. Thus, we acknowledge that the inclusion of the term 'patient characteristics' has the potential to cause iniquity and stigmatisation among individuals with frailty, as previously mentioned in the literature [10]. However, content items in this theme aimed at enhancing patient safety, such as general knowledge about patients' response to noise disturbances. Long and colleagues (2013) found that older patients are more prone to experiencing patient safety incidents than younger patients, while others have suggested that frailty increases the risk of adverse events [49, 50]. Including a metatext following the content items list could be advantageous in highlighting physicians' personal knowledge, awareness, and intentions towards diminishing instances of ageism. This holds particularly true in graduate medical education (GME), where geriatric education is not necessarily included in educational programs [51]. As Farrell (2023) states, "Health professions students [in GME] should also understand both the historical context of ageism and its associated harms" [52].

Operationalizability of content items

Unfortunately, a large amount of evidence-based research lacks implementation [53]. One reason for this might be the gap between research-based best clinical practice and the actual behaviour of physicians, implying that behavioural change is challenging [54]. We recognise that managing 108 content items while conducting ward rounds may present a significant challenge. Future research should focus on evaluating the practicality of this content list. By utilising Kern's six-step model for curriculum development, the content items provide the general and targeted needs assessment for improving the practice of conducting efficient ward rounds. To deepen the understanding and perspectives on conducting ward rounds, we have conducted a literature study and an interview study involving patients and caregivers [7, 55]. Building on these findings, the subsequent steps include the co-design of a cognitive aid in collaboration with patient representatives. This cognitive aid will then be implemented and its effect on ward rounds evaluated through further studies [23]. When adapting this study's findings to local practices, engaging local stakeholders is essential to ensure the final list of content items reflects and integrates the unique needs and characteristics of the local context.

Lastly, we recognise the importance of integrating these content items into resident training programs and national guidelines for ward round practices. While colleagues in Germany have developed an EPA for Internal

Medicine ward rounds, it serves as a behavioural checklist rather than an EPA that incorporates stepwise progression of learners' competencies [56]. As a next step, the development of an Entrustable Professional Activity (EPA) specifically tailored to ward rounds for older patients with frailty seems relevant [57].

Limitations

This study has several limitations. A key limitation of this study is the exclusion of multidisciplinary staff, which have restricted interprofessional perspectives on ward rounds. However, a nurse was represented among the medical communication experts who completed all five Delphi rounds. The sampling of Delphi study participants has no standardised protocol, and the study may have favoured a geriatric opinion in rating of items, as peer nomination only resulted in five medical communication experts. However, the iterative nature of Delphi studies allows participants to reassess and refine their judgments based on feedback from other panellists and the close alignment to the Calgary Cambridge Guide reflects the involvement of the medical communication experts [21]. Another limitation of the study participant sample is the reliance on senior specialists only among geriatric experts, as this may have perpetuated a paternalistic approach. It is important to recognise that involving a broader group of participants could result in different set of content items.

The decline in participants from 35 to 13 across Delphi rounds is an important limitation. While this is a common challenge in Delphi methodology, often reflecting the time-intensive nature of the process and participant fatigue, it may impact the generalisability of the findings [21]. However, as high-performing doctors are more likely to participate, the later rounds likely reflect input from those most invested in the topic, enhancing its relevance [58]. However, the five-round Delphi process was important for moderating content items with participants' feedback, as items were revised during the following round before being assessed for consensus.

Although research implies that the perspectives of patients and relatives may differ from the perspectives of HCPs, no patient or relatives were included in the present study [59]. Nonetheless, this study is an important first step towards creating a framework for conducting more efficient ward rounds with older patients with frailty. Hence, studies on the perspectives of patients and relatives should be made to build on the findings from the present study.

Conclusions

We identified 108 content items for conducting ward rounds with older patients living with frailty, which were categorised into four themes: Preparing ward rounds,

undertaking ward rounds, competencies, and circumstances related to the patient group. Preparing and conducting ward rounds described the management of the ward round. Competencies and circumstances included knowledge, skills, and attitudes to improve ward round quality. This study addresses both theoretical and practical aspects of holistic care, aiming to bridge educational goals with clinical practice. Our findings provide a comprehensive foundation for developing training programs equipping HCPs to handle the complexities of managing ward rounds in older patients with frailty. However, further validation and refinement through multidisciplinary and patient/carer involvement are needed to ensure a more comprehensive and inclusive foundation.

Abbreviations

CanMEDS	Canadian Medical Education Directives for Specialists
CGA	Comprehensive Geriatric Assessment
DNACPR	Do not attempt cardiopulmonary resuscitation
GME	Graduate Medical Education
HCP	Healthcare professionals

Supplementary Information

The online version contains supplementary material available at <https://doi.org/10.1186/s12909-025-07005-0>.

Supplementary Material 1
Supplementary Material 2
Supplementary Material 3
Supplementary Material 4
Supplementary Material 5

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Author contributions

LA wrote the main manuscript text. All authors reviewed the manuscript.

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Data availability

The datasets generated and analysed during the current study are available in the “figshare” repository, available at <https://doi.org/10.6084/m9.figshare.24899412.v1>.

Declarations

Ethics approval and consent to participate

The Regional Ethics Committee of the Central Denmark Region exempted the study from ethical approval under Danish law, i.e. according to the Act on Research Review of Health Research Projects (reference number: 1-10-72-207-22). The study was conducted in accordance with the principles of the

Declaration of Helsinki. Delphi study participants gave informed consent to participate.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

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