



# What is geriatric rehabilitation and how should it be organized? A Delphi study aimed at reaching European consensus

Romke van Balen<sup>1</sup>  · Adam L. Gordon<sup>2,3</sup> · Jos M. G. A. Schols<sup>4</sup> · Yvonne M. Drewes<sup>5</sup> · Wilco P. Achterberg<sup>6</sup>

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## Key summary points

**Aim** To reach European Consensus on Geriatric Rehabilitation using a modified Delphi Procedure.**Findings** Consensus was reached on 61 statements on a broad range of topics.**Message** This consensus is important to facilitate exchange of best practice and compare results of scientific research.

## Abstract

**Purpose** Many European countries have developed services to rehabilitate the increasing number of older people who experience an acute or subacute decrease in function after a medical event such as a hip fracture or stroke. However, there are important differences between countries regarding patient selection, organization of services, length of stay, and content of the rehabilitation process. The lack of consensus around, and quality criteria for, geriatric rehabilitation limits opportunities for exchange of best practice and scientific research.

**Methods** 33 experts, mostly geriatricians with experience in geriatric rehabilitation, from 18 European countries were invited to participate in a modified Delphi study. They were asked to react to 68 statements using a five-point Likert scale. The statements were formulated on the basis of literature review and practice experience, and were initially piloted among Dutch elderly care physicians. Consensus was defined beforehand as an Interquartile Range (IQR) of  $\leq 1$  for each statement.

**Results** Consensus was reached on 61 (90%) statements after two rounds. The resulting consensus covers: the need for a multi-disciplinary approach to Geriatric Rehabilitation after CGA; inclusion of patients with temporary confusion or cognitive decline; use of structured goal-oriented rehabilitation plans; the necessity of an early start of rehabilitation; preference for ambulatory rehabilitation or Geriatric Rehabilitation at home; the advantage of protocolled treatment programs; the need for consensus on patient outcome assessment instruments; and education and training in Geriatric Rehabilitation for healthcare professionals.

**Conclusion** These consensus statements provide a first step towards more coherent organization and delivery of geriatric rehabilitation across Europe.

**Keywords** Geriatric rehabilitation · European consensus · Delphi procedure

✉ Romke van Balen  
R.van\_Balen@lumc.nl

<sup>1</sup> Department of Public Health and Primary Care, Leiden University Medical Centre, Hippocratespad 2, Postzone VO-P, Postbus 9600, 2300 RC Leiden, The Netherlands

<sup>2</sup> Division of Medical Sciences and Graduate Entry Medicine, University of Nottingham, Nottingham, UK

<sup>3</sup> Room 4113, Derby Medical School, Royal Derby Hospital, Derby DE22 3NE, UK

<sup>4</sup> Department of Health Services Research-Focusing on Value-based Care and Ageing and Department of Family Medicine, Caphri, Care and Public Health Research Institute, Maastricht University, Duboisdomein 30, 6229 GT Maastricht, P.O. Box 616, 6200 MD Maastricht, The Netherlands

<sup>5</sup> Department Internal Medicine, Section Gerontology and Geriatrics, Leiden University Medical Center, Leiden, The Netherlands

<sup>6</sup> Department of Public Health and Primary Care, Leiden University Medical Center, Hippocratespad 21 Postzone, VO-P, Room V6-76, Postbus 9600, 2300 RC Leiden, The Netherlands

## Introduction

The ageing of the population has led to increased demand for Geriatric Rehabilitation (GR) services across Europe. Many countries have developed ways to support the increasing number of older people who experience acute and subacute decrease in function after a medical event such as hip fracture, stroke, COPD exacerbation, and heart failure. These approaches have included the development of intermediate care services in community hospitals, skilled nursing facilities and at home.

There is evidence that the approaches taken to GR differ between European countries [1]. Comparison of how GR is described in curricula for postgraduate education in Germany, the United Kingdom, and The Netherlands revealed agreement about the need for: a multidisciplinary approach, led by a geriatrician, after Comprehensive Geriatric Assessment; a tailored rehabilitation plan with regular evaluation of progress using patient outcome measurements; core competencies in the management of complications including pressure sores, venous thromboembolism, contractures, aspiration pneumonia, and urinary tract infections [2]. A multidisciplinary approach has been shown to be effective in rehabilitation after stroke, hip fracture, and, in general, geriatric rehabilitation [3–6]. However, there is no published consensus on which patient characteristics should be used for selection into GR, on how rehabilitation plans should be structured, on whether and how protocols should be used, on whether and how outcome measures should be used to benchmark GR services, or on the preferred setting and length of stay. [7–9].

The differences in service specifications and the lack of consensus in GR belie patient populations which are very similar between countries. Consensus around how best to meet the needs of these populations could support more consistent approaches to GR internationally which could, in turn, provide a foundation for shared learning from service development and research. We set out to establish consensus around core principles in geriatric rehabilitation using a modified Delphi procedure.

## Methods

Our modified Delphi study used a list of statements initially compiled from literature on definition of geriatric rehabilitation, descriptions in post graduate geriatric curricula, and the clinical experience of the researchers. Our panel was assembled by approaching experts in GR across Europe through the European Geriatric Medicine Society (EUGMS) and the European Academy for Medicine of Ageing (EAMA). Forty-two experts, mostly geriatricians, were invited, of which 34 agreed to participate. One subsequently asked to be removed from the panel, because she felt insufficiently expert to respond to the questionnaire. Eight experts, one occupational therapist and seven geriatricians, did not respond to the invitation despite several reminders.

The remaining 33 experts (Table 1) were asked by email to react to 68 statements (Appendix Table 5, 6, 7, 8, 9) on a five-point Likert-type scale ranging from full agreement to full disagreement with opportunity to provide free text in support of their response under each statement. 14 statements concerned the selection of patients, 11 the composition of the multidisciplinary team, 21 the structure and quality of the rehabilitation plan, 19 the organization of care, and three concerned education. The questionnaire was piloted among six Dutch elderly care physicians for comprehensibility and suitability.

The most common definition of consensus in Delphi studies is percentage of agreement, followed by the proportion of participants agreeing in a specific rating range [10]. We used interquartile range (IQR) to measure agreement, using the commonly used cut-off of an IQR of  $\leq 1$  point on the Likert scale [11]. Where consensus was reached on a statement, it was removed from the subsequent round. Free-text comments from participants were reviewed by the researchers to revise or remove statements which did not achieve consensus.

At the second round, panel members were provided with their original first-round answers together with the anonymous responses and comments from all other participants. The first questionnaire was sent in August 2018 with reminders after 2 weeks and 1 month. The second-round questionnaire was sent in December 2018.

**Table 1** Background participants

Country	Finland 4 x, Spain 4 x, Norway 3 x, Austria 2 x, Germany 2 x, United Kingdom 2 x, Netherlands 2 x, Belgium 2 x, Estonia 2 x, Sweden 2 x, Denmark, France, Serbia, Ireland, Slovenia, Italy, Switzerland, Czech Republic
Age en sex	Average 52 years (range 34–65), 47% women
Profession	Geriatrician 24 x, primary care physician 1 x, elderly care physician 2 x, physiotherapist 3 x, psychogeriatrician 1 x, missing 2 x
Experience in GR	Average 15 years (range 0–30)

Approval from a medical ethics committee was not necessary, because under Dutch law, these kinds of surveys are exempt from ethical approval.

## Results

### Participants

33 experts from 18 European countries participated (Tables 1). Twenty-seven respondents were geriatricians, three were physiotherapists, two were elderly care physicians, and one was a primary care physician. The mean (SD) experience in GR was 15 (range 0–30) years.

### Round 1

Consensus was reached on 46 of 68 statements (68%) (Appendix Tables 5, 6, 7, 8, 9): 5 statements (36%) on selection of patients, 8 statements (72%) on the composition of the multidisciplinary team, 16 (76%) statements on the structure and quality of the rehabilitation plan, 14 (74%) statements on the organization of care, and 3 (100%) statements on education.

### Round 2

Six statements which caused particular difficulty for respondents were removed prior to the second round. Participants gave such a wide range of responses to the statement 5, drawing distinction between geriatric and adult rehabilitation, that it was impossible to sufficiently capture these in a concise statement. Statement 10 on selection of patients seemed to confuse most respondents and was, therefore, removed. Spiritual counsellors and orthotists were stated by most respondents to be unnecessary as MDT members and these options were removed from the second round. The term oncological rehabilitation was not widely recognized and the statement about this was removed. Participants were invited to respond to the remaining 16 revised statements and reached consensus on all but one (Table 1, 2, 3). This concerned statement 3 (in selection of patients) about the necessity of the existence of frailty or impairments due to pre-existing conditions before the acute decline in function. After two rounds, consensus was reached in 61 of 68 statements (90%) with a variation in median between 4 and 5, which means that there was always consensus to agree with the statements (Table 2, 3, 4).

**Table 2** Revised statements second round

Statement	Result	Consensus Y/N
<b>Selection</b>		
Geriatric rehabilitation (GR) should mostly be given to persons over 70, and only in exceptional cases persons younger than 65 who have frailty maybe included	<i>N</i> = 33, Median 5 IQR 1	Y
An acute decline in function (within 24 h, for example due to a stroke or hip fracture or an acute disease such as pneumonia) should mostly precede GR. However, persons with measurable subacute decline in chronic diseases (e.g. Parkinson's disease) may also benefit from GR	<i>N</i> = 32, Median 4.5 IQR 1	Y
Before the acute decline in function, most GR patients will be frail and/or have impairments due to pre-existing chronic conditions	<i>N</i> = 32, Median 4 IQR 3.75	N
Exercise tolerance in GR is limited and should therefore be individually assessed to tailor the therapy intensity and load	<i>N</i> = 32, Median 5 IQR 1	Y
There should be an expectation of improvement in (I)ADL functions and/or participation and/or quality of life for the patient when starting GR	<i>N</i> = 32, Median 5 IQR 0.75	Y
Hospital and GR rehabilitation services should evaluate their engagement with the referral process at least once per year. This should be evaluated sooner in case of "red flags" such as lengthening of hospital stay, increasing mortality during rehabilitation, increasing hospital admissions, decreasing amount of patients discharged home after rehabilitation	<i>N</i> = 32, Median 5 IQR 1	Y
All low-energy trauma hip fracture patients should be considered for GR, either in an institutional setting or at home	<i>N</i> = 33, Median 5 IQR 0	Y

Dimension selection of patients. Answer options: full agreement = 5, slightly agreement = 4, undecided = 3, slightly disagreement = 2, and full disagreement = 1

**Table 3** Revised statements' second round

Multidisciplinary team		
A GR team should at least consist of a doctor trained in GR, a physiotherapist and a nurse with the possible addition of an occupational therapist, a dietician, a psychologist, a speech therapist, a psychologist, and a social worker	<i>N</i> =33, Median 5 IQR 0.5	Y
Rehabilitation plan		
This (rehabilitation) plan should be structured according to a multidimensional model such as the International Classification of Functioning, Disability and Health or Comprehensive Geriatric Assessment	<i>N</i> =33, Median 5 IQR 0.5	Y
Rehabilitation plans should be goal-oriented, with a time dimension attached to them	<i>N</i> =30, Median 5 IQR 0	Y
Regular evaluations of the rehabilitation plan should be planned and executed, even when the duration of rehabilitation exceeds 3 months	<i>N</i> =30, Median 5 IQR 0.25	Y
If indicated, the GR should start as soon as possible, preferably on the first day in hospital but in any case, if medically stable, within 5 days after hospital admission	<i>N</i> =30, Median 5 IQR 0	Y

Dimension multidisciplinary team and rehabilitation plan. Answer options: full agreement=5, slightly agreement=4, undecided=3, slightly disagreement=2, and full disagreement=1

**Table 4** Revised statements' second round

Organization		
Geriatric rehabilitation should be preferably executed in an ambulatory setting, preferably in the patient's own home, and supported by a dedicated multidisciplinary team	<i>N</i> =33, Median 4 IQR 1	Y
Preferably, specialized units for neurological and orthopedic rehabilitation should be installed	<i>N</i> =30, Median 5 IQR 1	Y
If possible, to maintain continuity of care, the same GR team should supervise rehabilitation in both the institutional and community setting	<i>N</i> =29, Median 5 IQR 1	Y
In GR, electronic health solutions should be used to improve self-management	<i>N</i> =27, Median 5 IQR 1	Y

Dimension Organization. Answer options: full agreement=5, slightly agreement=4, undecided=3, slightly disagreement=2, and full disagreement=1

### Free-text comments

The free-text comments gave important insights into dilemmas about delivery of GR. These points are captured under subheadings below.

#### Selection of patients

There was agreement about the statement that GR should mostly be given to people over 70 years and that only in exceptional cases should people younger than 65 who have frailty been included. Several participants commented that 65 years was too young for the lower threshold and that an age limit of 75 years was more appropriate for inclusion in GR more generally. It was reported that in some countries, funding for GR is predicated upon a cut-off which differentiates geriatric from internal medicine rehabilitation. By contrast, in the UK and Ireland, no distinction is made between adult and geriatric rehabilitation in stroke rehabilitation, with the justification that specialist skills around spasticity management, neglect, cognition, and so on do

not differ between younger and older patients. Respondents expressed difficulty with the idea of geriatricians leading rehabilitation for younger patients. The expressed tension was between a lack of competency in managing this age group and the recognition that frailty could manifest even in younger patients.

Related to the statement that acute decline in function mostly precedes GR, some participants remarked that GR does not only aim to restore function but also to prevent functional decline. In Germany, for example, a patient has the right under law to rehabilitation before admission to long-term care, and in this context, a slow decline in function could be an indication for GR.

Consensus was not established about the statement that before the decline in function, most GR patients must be frail and/or have impairments due to pre-existing chronic conditions. The assertion was that sudden and severe functional decline can result in impairment in activities of daily living even in older patients who were not premorbidly frail, with hip fracture being used as an example by several respondents.

There was full agreement with the statement that patients with confusion/delirium or cognitive decline should not be excluded from GR when there is rehabilitation potential. Several respondents stated that patients with early stage dementia could also be rehabilitated. Delirium was mentioned as one of the most important comorbid conditions in patients suited for GR. These patients should be rehabilitated in settings where the staff is trained and the environment designed to accommodate their behavior, so that rehabilitation is safe and they do not hinder the rehabilitation of patients without delirium.

There was agreement that referral to GR should be based on patient characteristics, individual rehabilitation needs, motivation, and rehabilitation potential during round 1. Respondents made remarks about the difficulty of assessing motivation in depressed patients who present as demotivated but who could benefit from physical exercise and social interaction through rehabilitation. More generally, several respondents challenged professionals' ability to adequately prognosticate about rehabilitation outcomes in the face of clinical complexity and frailty. A "trial of rehabilitation" was felt to be an important measure where clinicians were uncertain about rehabilitation potential.

### Multidisciplinary team

Three statements about the necessity of a multidisciplinary team, working with an interdisciplinary approach, and preferably led by a doctor trained in geriatric rehabilitation reached consensus. Participants, however, stressed the notion that no single professional has all the needed skills and other professionals, such as physiotherapists or nurses, could also be the leader of the team. "The actual person in the lead depends on the leading skills and not what is written in the job title." Regarding composition of the team, there was agreement that this should at least comprise a doctor trained in GR, a physiotherapist and a nurse, with the possible addition of an occupational therapist, a dietician, a psychologist, and a social worker. Team composition might vary depending on the type of rehabilitation. In stroke rehabilitation, psychologists were stated to be important, whilst dieticians were stated to be particularly relevant in COPD rehabilitation.

### Rehabilitation plan

There was consensus about the need for a rehabilitation plan driven by Comprehensive Geriatric Assessment, that progress should be measured regularly using objective goals which have a time dimension. A tension was evident between the practical utility of time-delimited rehabilitation goals and the need to give some patients longer time periods to recover along slower trajectories. The same tension was

identified around the need to set a discharge date soon after admission to GR. Whilst several respondents highlighted that this provided much needed focus, others highlighted the need to flex discharged dates around patient progress. There was no consensus about what multidimensional model should be used to construct a rehabilitation plan. Some respondents recommended the use of the International Classification of Functioning, Disability and Health, but others thought it to be time-consuming and unnecessarily complicated. Similarly, whilst there was agreement that a nationally agreed suite of outcome measures was necessary to benchmark GR, there was no consensus about what domains should be included, with tension between comprehensiveness and feasibility. Some respondents wanted to include outcome measures around frailty, sarcopenia, hearing, and vision, whilst others favoured a much narrower and easier to collate set of measures.

### Organization

Although consensus was achieved that GR should preferably be conducted in an ambulatory setting, several participants commented that the term rehabilitation in their country is used for inpatients only, and that in several countries, no opportunities for ambulatory rehabilitation were available. Comments highlighted situations related to specific ADL impairments, or aspects of medical instability that might challenge ambulatory rehabilitation, and the fact that ambulatory settings might sometimes be used for "step-down" rehabilitation after a period of institutional rehabilitation.

Although the statement achieved consensus, some disagreement was evident around the issue of establishing specialized units for neurological and orthopedic rehabilitation. Respondents reported that in some countries, for example Switzerland, orthopedic rehabilitation and neurological rehabilitation were completely separate from GR. A more general tension was expressed between the contributions that geriatricians could make to some units and their need to maintain a more holistic focus on geriatric syndromes. Several respondents highlighted the need for every geriatric ward to have core competencies in GR. The need for GR in tertiary-level university hospitals, for instance for patients following general surgery and internal medicine disorders, was strongly stated. There was less consistent agreement about how feasible GR was in smaller local hospitals, although some respondents, for example those from the UK, stated that GR expertise was available in all hospitals. There was agreement about the statement that to maintain continuity of care, the same GR team should, if possible, supervise rehabilitation in both institutional and community settings. A number of respondents, however, challenged the feasibility of organizing such care, particularly in countries where professionals trained in GR are scarce. Agreement around

the use of e-health to improve self-management was caveated by several comments that such solutions should only be adopted when clearly superior to non-electronic solutions.

## Discussion

This study is the first to establish European consensus on definition and quality criteria of geriatric rehabilitation (GR) using a Delphi method. Thirty-three experts from 18 European countries agreed on 61 statements across 5 main topics: selection of patients, multidisciplinary team, rehabilitation plan, organization of care, and education.

Our study confirms that geriatric rehabilitation should start with Comprehensive Geriatric Assessment and should use a multi/interdisciplinary approach in which basic guiding principles for the care of older patients with multimorbidity are incorporated [12]. The multidisciplinary team should at least include a doctor trained in geriatric rehabilitation, a physiotherapist and a nurse. According to the patients' needs, the team can be extended with an occupational therapist, a speech and language therapist, a dietician, a psychologist, and a social worker. Further, a structured rehabilitation plan should be compiled which should be orientated around the goals of the patient [13] and time limited. This plan should be evaluated regularly with guaranteed contribution of the patient and/or patient's representative. The GR team should use measurement/assessment instruments for the evaluation of patients' functioning and participation. These requirements do not differ from the ones used in adult rehabilitation [14].

Our consensus suggested most patients who have an indication for GR, are 75 years and older and in some countries, for instance in Belgium, a strict age limit is used for reimbursement. However, most geriatricians agreed that younger patients also can benefit from GR if they are frail with multiple comorbidities associated with intercurrent diseases [15] and limited exercise tolerance. In our study, we reached no consensus about the statement that most GR patients should be frail prior to acute decline in function that presents the opportunity for geriatric rehabilitation. A substantial number of respondents considered older patients, who were without impairment before the medical event, candidates for GR if they needed rehabilitation after acute decline in function. We conclude that frailty and impairments before the acute decline in function are not strict requirements for GR, but that multiple comorbidity and an increased risk of medical complications should usually be present.

In several countries, such as Germany and Switzerland, GR is confined to institutional care preceded by a hospital admission. Often, health care finance systems only reimburse the stay in an institution for a limited time of 3–6 weeks. Although many GR patients need institutional care after

hospital admission because of their care dependence, the multidisciplinary rehabilitation should also be available in other settings such as an outpatient clinic, a day hospital or at home. There was consensus about the statement that GR should be preferably provided in an ambulatory setting or at home. Evidence for the effectivity of ambulatory GR is scarce, but exists for stroke and hip fracture patients. [16, 17] More research is needed regarding the feasibility and effectivity of ambulatory GR.

An important finding concerns the desirability of sub-specialization within GR according to index diagnosis. Although GR patients have common characteristics and, therefore, need the same approach, common sense tells us that specialization will improve the quality of care. The effectivity of this approach is difficult to prove and only scarce evidence exists [18]. However, most participants agreed that preferably, specialized units (or multidisciplinary teams) for neurological and orthopedic rehabilitation should be installed. A recent study has shown that evidence for effectiveness of diagnosis-specific geriatric rehabilitation extends to COPD, but the comparator in such studies is almost never generic geriatric rehabilitation [19].

The most used definition of geriatric rehabilitation is nearly 3 decades old: "Diagnostic and therapeutic interventions whose purpose it is to restore functional ability or enhance residual functional capacity in older people with disabling impairments" [20]. Our findings do not contradict this definition, but suggest adding some requirements such as the presence of multimorbidity, the aim for participation goals, and that it mostly follows an acute or subacute decline in function.

Our study has several limitations. First, the responding experts were recruited by approaching EUGMS board members and via personal contacts. Although they were mostly geriatricians with considerable experience in GR, they were not official country representatives for GR and do not automatically express the opinions of other professionals in GR such as physiotherapists and occupational therapists. Also, from 28 European Union countries, only 18 were represented in the group of participants. Second, the chosen statistical measure of consensus results in underexposure of potentially important minority opinions. Third, the statements were based on literature, comparison of curricula for postgraduate geriatric training, and personal experience. This process was, by nature, subjective, and important issues could have been missed.

The strength of our study lies in the use of an established way of reaching consensus, the Delphi procedure. Participants were asked to respond to statements which covered several important topics in GR. They responded by email in two rounds with anonymous controlled feedback which minimized the following of opinions of authorities. By explicitly discussing the opinions of non-consenters, we have tried to

nance the consensus per statement. The inclusion of other stakeholders who are involved in geriatric rehabilitation, especially patients and their informal caregivers, would have made the research more complete, but would have required multiple different questionnaires to accommodate differing perspectives and expertise. This would have rendered a more complicate approach to analysis. As this was a first step towards a final consensus, we chose to keep things simple by working to reach consensus among professional experts first. It could be a next step to include other stakeholders.

In conclusion, the results of our study show consensus of European experts on a broad range of topics in geriatric rehabilitation. This consensus is important to facilitate exchange of best practice and compare results of scientific research.

## Compliance with ethical standards

**Conflict of interest** On behalf of all authors, the corresponding author states that there is no conflict of interest.

**Ethical approval** Approval from a medical ethics committee was not necessary, because under Dutch law, these kinds of surveys are exempt from ethical approval.

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## Appendix

See Tables 5, 6, 7, 8, 9.

**Table 5** Statements' first round

Statement	Result	Consensus Y/N
<i>Selection of patients</i>		
1. Geriatric rehabilitation is mostly given to persons over 65 years, but younger persons should not be excluded	<i>N</i> = 32, Median 4 IQR 3	N
2. An acute decline in function (within 24 h, such as stroke or hip fracture, or an acute disease such as pneumonia or exacerbation COPD) should always precede GR	<i>N</i> = 32, Median 2 IQR 3	N
3. Before the acute decline in function, GR patients should have impairments in (ADL and/or IADL) function due to pre-existing chronic conditions	<i>N</i> = 32, Median 2 IQR 2.75	N
4. Exercise tolerance in GR patients should be limited (< 2 h/day)	<i>N</i> = 32, Median 2 IQR 2	N
5. The distinction with the indication for medical specialist rehabilitation (rehabilitation clinics with rehabilitation specialists/physiatrists) should be primarily made on the basis of needed and tolerated intensity of therapy	<i>N</i> = 32, Median 4 IQR 3	N
6. Patients with confusion/delirium or cognitive decline should not be excluded from GR when there is rehabilitation potential	<i>N</i> = 31, Median 5 IQR 1	Y
7. Referral to GR should be a clinical, patients-centred decision based on:		
A: Patient characteristics	<i>N</i> = 32, Median 5 IQR 0	Y
B: Individual rehabilitation needs	<i>N</i> = 31, Median 5 IQR 0	Y
C: Motivation	<i>N</i> = 31, Median 4 IQR 1	Y
D: Rehabilitation potential	<i>N</i> = 31, Median 4 IQR 1	Y
8. The functional prognosis of a GR patient should be favourable	<i>N</i> = 31, Median 4 IQR 2	N
9. Hospital and GR rehabilitation teams should regularly, at least twice a year, evaluate their cooperation in the referral process	<i>N</i> = 32, Median 4.5 IQR 1.75	N
10. Two-thirds of all stroke patients above 65 years who need institutional rehabilitation should be GR patients	<i>N</i> = 32, Median 3 IQR 2.5	N
11. All low-energy trauma hip fracture patients should receive geriatric rehabilitation	<i>N</i> = 32, Median 4 IQR 2.75	N

Domain selection of patients. Answer options: full agreement = 5, slightly agreement = 4, undecided = 3, slightly disagreement = 2, and full disagreement = 1



**Table 6** Statements' first round

Statement	Result	Consensus Y/N
<i>Multidisciplinary team</i>		
1. GR should be provided by a multidisciplinary team	<i>N</i> =32, Median 5 IQR 0	Y
2. The multidisciplinary team should work interdisciplinary, that means integrating knowledge and methods from different disciplines, using a real synthesis of approaches	<i>N</i> =32, Median 5 IQR 0	Y
3. The leader of the multidisciplinary team should be a doctor trained in geriatric rehabilitation	<i>N</i> =32, Median 5 IQR 1	Y
4. A team should consist of at least a doctor trained in GR and a physiotherapist. If the GR is institutional than a nurse should be included in the team	<i>N</i> =32, Median 5 IQR 2	N
5. According to the needs of the patient, the team, in addition to the doctor, nurse and physiotherapist can be extended with:		
A: Occupational therapist	<i>N</i> =32, Median 5 IQR 0	Y
B: Social worker	<i>N</i> =32, Median 5 IQR 1	Y
C: Psychologist	<i>N</i> =32, Median 4 IQR 1	Y
D: Speech therapist	<i>N</i> =32, Median 5 IQR 1	Y
E: Dietician	<i>N</i> =29, Median 5 IQR 0	Y
F: Spiritual counsellor	<i>N</i> =27, Median 4 IQR 1	N
G: Orthotist/prosthetist	<i>N</i> =31, Median 4 IQR 2	N

Domain multidisciplinary team. Answer options: full agreement=5, slightly agreement=4, undecided=3, slightly disagreement=2, and full disagreement=1

**Table 7** Statements' first round

Statement	Result	Consensus Y/N
<i>Rehabilitation plan</i>		
1. For each GR patients a rehabilitation plan should be compiled for which the doctor, trained in geriatric rehabilitation, is responsible	<i>N</i> =32, Median 5 IQR 1	Y
2. This plan should be based on a comprehensive geriatric assessment	<i>N</i> =32, Median 5 IQR 0	Y
3. This plan should be structured using the International Classification of Functioning, Disability and Health, or an equivalent classification system	<i>N</i> =32, Median 4 IQR 1.75	N
4. This plan should be evaluated at least twice during the first 3 months of rehabilitation; more evaluations should follow if the duration exceeds 3 months	<i>N</i> =30, Median 5 IQR 2	N
5. Total GR rehabilitation (in- and outpatient together) should not be longer than 1 year	<i>N</i> =29, Median 4 IQR 2	N
6. The contribution of patient/family caregiver should be guaranteed in the compiling and evaluation of the rehabilitation plan	<i>N</i> =28, Median 5 IQR 1	Y
7. If indicated, the GR should start within 5 days after hospital admission	<i>N</i> =30, Median 5 IQR 1.25	N
8. As soon as possible, in most cases within 1 week after admission to the GR institution, a discharge date should be agreed on together with patients and caretakers	<i>N</i> =30, Median 4 IQR 1	Y
9. For several diagnosis groups a protocolled treatment program and care path should be used This applies at least for:		



**Table 7** (continued)

Statement	Result	Con-sensus Y/N
A: Stroke	<i>N</i> =30, Median 5 IQR 1	Y
B: Hip Fracture	<i>N</i> =30, Median 5 IQR 0	Y
C: COPD or other types of organ failure such as heart failure	<i>N</i> =29, Median 5 IQR 1	Y
D: Oncological rehabilitation	<i>N</i> =29, Median 4 IQR 2	N
E: Parkinson's disease	<i>N</i> =30, Median 5 IQR 1	Y
F: Falls and postural instability	<i>N</i> =30, Median 5 IQR 1	Y
10. At discharge from the institution, remaining goals in functioning and participation and the way (how these additionally can be achieved at home/ambulatory, should be discussed, and started. There should be a fluent continuity of care from inpatient to outpatient care. This should apply for every GR patients	<i>N</i> =29, Median 5 IQR 0	Y
11. For the individual evaluation of patient's functioning and participation, for benchmark and scientific research, multidisciplinary general measurement/assessment instruments, feasible for every GR patient, should be used. These should include measurement of	<i>N</i> =28, Median 5 IQR 0	Y
A: ADL		
B: IADL	<i>N</i> =28, Median 5 IQR 0.75	Y
C: Participation	<i>N</i> =28, Median 5 IQR 1	Y
D: Goal attainment	<i>N</i> =28, Median 5 IQR 0	Y
E: Cognitive/behavioral problems	<i>N</i> =27, Median 5 IQR 0	Y
12. There should be country-wide agreement about which measure instruments should be used for benchmark and scientific research	<i>N</i> =26, Median 5 IQR 1	Y

Domain rehabilitation plan. Answer options: full agreement=5, slightly agreement=4, undecided=3, slightly disagreement=2, and full disagreement=1

**Table 8** Statements' first round

Statement	Result	Con-sensus Y/N
<i>Organization</i>		
1. Geriatric rehabilitation should be preferably home-based and involves a dedicated multidisciplinary team	<i>N</i> =32, Median 4 IQR 2	N
2. For institutional geriatric rehabilitation, specialized units must be installed for (at least) neurological and orthopedic rehabilitation	<i>N</i> =32, Median 5 IQR 1.75	N
3. The multidisciplinary team, especially the nursing staff, should establish a therapeutic climate on the GR ward. This means that 24 h a day, 7 days in an week, every action around the patient is focused on rehabilitation	<i>N</i> =31, Median 5 IQR 0	Y
4. A registered GR nurse or physician assistant should be available 24 h/day in the institution where GR is delivered	<i>N</i> =31, Median 5 IQR 1	Y
5. All other nursing personnel should have followed an extra education program in geriatric rehabilitation	<i>N</i> =31, Median 5 IQR 1	Y

**Table 8** (continued)

Statement	Result	Con- sensus Y/N
6. There should be enough medical and nursing competency regarding the management of:		
A: Nasogastric tubes	<i>N</i> = 30, Median 5 IQR 1	Y
B: Percutaneous gastric tubes	<i>N</i> = 30, Median 5 IQR 1	Y
C: Tracheostomy	<i>N</i> = 30, Median 4 IQR 2	N
D: Intravenous fluids	<i>N</i> = 29, Median 5 IQR 0.5	Y
7. The doctor and therapists should be educated in GR	<i>N</i> = 29, Median 5 IQR 0	Y
8. A written agreement should exist between referring hospital and GR facility about transfers of patients and required information	<i>N</i> = 30, Median 5 IQR 1	Y
9. Information about transfer of care and organization of care in the following situation (institution or home) written and/or digital should be available for patients/family caregivers	<i>N</i> = 30, Median 5 IQR 0.25	Y
10. To maintain continuity of care, the same team should supervise rehabilitation in the institutional and community settings	<i>N</i> = 29, Median 2 IQR 2	N
11. Ambulatory GR should be available for patients immediately following hospital discharge	<i>N</i> = 30, Median 5 IQR 1	Y
12. Referral to ambulatory GR should be available for patients living in the community and a hospital/ institutional admission before starting GR should not be necessary	<i>N</i> = 30, Median 5 IQR 1	Y
13. Development and implementation of E-health and technology are important and should be under way in the organization of geriatric rehabilitation	<i>N</i> = 30, Median 5 IQR 1	Y
table 5 continued		
14. E-health in GR should be used to		
A: Improving patient empowerment (or self-management)	<i>N</i> = 30, Median 4.5, IQR 2	N
B: Facilitating the transition from inpatient to ambulatory GR and uniform recording throughout the total GR pathway	<i>N</i> = 27, Median 5 IQR 1	Y
15. GR should be insured care and free of extra costs for everyone	<i>N</i> + 30, Median 5 IQR 1	Y

Domain organization. Answer options: full agreement = 5, slightly agreement = 4, undecided = 3, slightly disagreement = 2, and full disagreement = 1

**Table 9** Statements' first round*Education*

1. There should be a special training program in geriatric rehabilitation in the postgraduate courses of:

A: Doctors	<i>N</i> = 30, Median 5 IQR 0	Y
B: Nurses	<i>N</i> = 31, Median 5 IQR 0	Y
C: All other disciplines (e.g., physiotherapists and occupational therapists)	<i>N</i> = 31, Median 5 IQR 1	Y

Domain education. Answer options: full agreement = 5, slightly agreement = 4, undecided = 3, slightly disagreement = 2, and full disagreement = 1

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