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Geriatricians' perceptions on multidisciplinary heart failure care in Belgium an exploratory qualitative study

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Abstract

Background The perceptions of general practitioners (GP), cardiologists and pharmacists on multidisciplinary heart failure (HF) care were studied before. However, geriatricians are often overlooked in HF research, despite the high prevalence of HF in the elderly. Therefore, we investigated how geriatricians perceive their role in multidisciplinary HF care.

Methods This study is a qualitative semi-structured interview study with geriatricians, working in Flanders, Belgium. Purposive sampling was performed, and interviews were conducted until data saturation was reached. The QUAGOL method was used for data analysis.

Results Thirteen geriatricians were interviewed. They reported to feel confident about HF management and see themselves as the guardians of the patient during hospitalization. Regarding care organization during the hospitalization phase, striking differences were reported in triage at the emergency department (ED). Geriatricians were satisfied with the collaboration with the cardiologists and valued their role, although they reported differences in vision about dealing with geriatric HF patients. Regarding transmural care organization, follow-up after hospitalization was valued highly to prevent rehospitalization but most geriatricians did not see this as their responsibility. They mostly passed on the follow-up to the GP and the cardiologist. Some did take this follow-up into their own hands in various forms because of the high rehospitalization rate and many suggested ways to improve the organization of multidisciplinary HF care. Advance care planning was seen as an important aspect of geriatrics, yet they expected more involvement from both the cardiologist and the GP in this matter.

Conclusions Based on these results, our study highlights three recommendations for optimizing the care of geriatric HF patients. First, the development of standardized methods to triage patients at the ED, in combination with geriatric-cardiologist co-management to ensure that each patient receives appropriate in-hospital care. Secondly, structured and closer transitional follow-up to limit readmission rates. Lastly, inclusion of advance care planning as a mandatory component in every HF program.

Keywords Heart failure, Geriatricians, Qualitative research, Health care organization

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Introduction

The prevalence of heart failure (HF) is especially high in older age groups [1–3]. Elderly patients with heart failure differ from younger patients in terms of management and long-term outcomes [2–5]. Since 90% of elderly with heart failure have a comorbidity and 50% have at least 5 additional conditions, treatment options should be considered individually, taking their frailty, comorbidities, polypharmacy, and the patient's own predetermined goals into account [2–6]. HF is one of the most frequent causes for hospitalization of elderly patients [3]. Therefore, optimal management of heart failure in the elderly is a priority in health care [3, 7].

The goal of heart failure management is to achieve a care continuum across different health care settings, as shown by multidisciplinary care programs [1]. As a minimum requirement, the NICE guideline recommends a geriatrician forms part of every HF multidisciplinary team [8]. Carrying out a comprehensive geriatric assessment in patients hospitalized for an acute disease is associated with a greater probability of survival, return home at discharge and a reduction in costs [9]. Although the role of the geriatrician in HF care is not commonly described in literature, a randomized controlled trial comparing a multidisciplinary intervention by a geriatrician and a cardiologist after a heart failure hospitalization in older patients showed this was superior to cardiologist's follow-up alone in reducing all-cause rehospitalization [10]. Levy et al. firmly stated that integrating geriatricians into HF services can be achieved and is a win-win for all, benefiting patients, caregivers, and health care providers [3]. Additionally, since geriatricians foster close links with primary care, they are well placed to support transitions of care, facilitate communication, and work collaboratively to avoid hospital admission [3]. However, in most multidisciplinary HF management studies, geriatricians were not involved [11]. Furthermore, the role of general practitioners (GPs), cardiologists and pharmacists in this multidisciplinary collaboration was studied before, but how geriatricians perceive their role is unknown [12–15].

Therefore, we want to study how geriatricians perceive their role in current and future multidisciplinary HF care through semi-structured interviews.

Methods

Study design

We used a qualitative design to study geriatricians' perceptions about their role in the current and future care of patients with heart failure. We took a phenomenological approach [16] and conducted face-to-face semi-structured interviews. The consolidated criteria for reporting qualitative research (COREQ) checklist were used as a guide to report our study [17] [Additional file 1].

Ethical considerations

We received approval from the Research Ethics Committee of the UZ/KU Leuven (MP018425) on the 7th of December 2021. All participating geriatricians gave their written informed consent prior to participation.

Setting

In Belgium, geriatric care has been officially organized by a Royal Decree approved in 2007 [18]. This care program comprises among others an inpatient geriatric support team (GST). These mobile multidisciplinary teams support health care professionals in treating geriatric patients admitted to non-geriatric units. The main aim is to share the core geriatric principles and multidisciplinary expertise. The multidisciplinary team encompasses geriatricians, nurses specialized in geriatric care, a physiotherapist, occupational, speech and language therapist and a psychologist [19]. Additionally, an external liaison is recommended for the follow-up of patients after hospitalization in their home setting. A geriatric day hospital is generally present for the ambulatory work-up of geriatric patients. A financial difference can be seen between the university hospitals, where the doctors work as employees, and the secondary hospitals, where it depends on the agreements made between the doctors and the hospital about how the earnings are divided.

Participants and recruitment

We contacted geriatricians, working in the region of Flanders, Belgium, by phone and e-mail, to ask to participate to the study. Recruitment was voluntary and we offered no remuneration. We conducted purposive sampling and aimed for variation in gender, years of experience, type of hospital (secondary, tertiary) and regional setting.

Data collection

After a literature review and discussion in the research team, a topic guide was created. This was set up in Dutch, a translated version can be found as Additional File 2. One of the authors (BN) conducted the face-to-face semi-structured interviews between January 2022 and July 2022. This researcher is a male, master GP student at the University of Leuven (KU Leuven) and worked as a GP trainee in Flanders, Belgium at the time of the interviews. He was familiar with some of the interviewees within a professional context and participants were informed about BNs occupation and personal goal of the study. MS trained the author in conducting interviews, and after two interviews the topic guide was evaluated and adapted to aim for maximal quality. Due to the Covid-pandemic, the interviews took place online through a video call, which was audio- and video-recorded. The interviews were transcribed verbatim, including verbal

and non-verbal signs. The interviews were conducted in Dutch, the native language of the interviewers and geriatricians, and participants decided a time convenient to them. We conducted interviews until we reached data saturation. We defined data saturation as the moment when the two latest interviews no longer contributed any new elements and when a certain theme had been exhaustively described in all its dimensions and variations. This signified that additional interviews would no longer provide new insights.

Data analysis

The interviews were conducted in cycles of three to four interviews and were then analyzed. After thirteen interviews data saturation was reached. The principles of the Qualitative Analysis Guide of Leuven (QUAGOL) were followed to guide data analysis [20]. QUAGOL is a theory and practice- based method that supports and facilitates the analysis of qualitative interview data. The process of analysis consisted of two steps: (1) a thorough preparation of the coding process and (2) the actual coding process, facilitated by NVIVO 12 software (QSR International, Melbourne, Australia). Each part consisted of five phases that were processed dynamically. During the preparatory phase, the aim was to become as familiar as possible with the interview data to compile a list of concepts as a starting point for the actual coding process in NVIVO 12. In the first phase two authors (MS and BN) each made a one-page narrative report and conceptual interview schemes of each transcript separately.

Afterwards, they analysed and compared the conceptual scheme of the various interviews to compile a joint list of concepts, through a constant comparison process. The data analysis started as soon as the first interview was performed and as the interviews progressed, emerging themes were noted and used to optimize the scheme of the topic guide for subsequent interviews. The second phase consisted of the actual coding process. Two of the authors (MS and BN) coded the data by linking each fragment of text to one of the concepts from the list. The concepts thus served as an initial coding tree in the program. The relevance and usefulness of the codes and concepts were evaluated and adjusted when necessary. In a last step, we distilled the storyline from the findings and concepts and discussed this within the research team to reach a consensus. The descriptive themes were created by merging codes of the same nature (inductive method). Analytical themes were derived from these descriptive themes via a thorough group discussion. To guide the analysis, a tentative thematic framework was developed, categorizing identified themes into barriers and facilitators. This framework was informed by initial data familiarization and iterative discussions within the research team. Using this structure, we systematically analyzed the data to highlight factors influencing multidisciplinary heart failure care at the macro, meso, and micro levels. The framework was refined throughout the analysis as new insights emerged, ensuring a comprehensive representation of the data.

To ensure trustworthiness, we employed several strategies: member checking during interviews, investigator triangulation among team members with different expertise, and maintaining a reflexive journal to critically reflect on biases. These steps were taken to enhance the credibility, dependability, and confirmability of the findings.

Table 1 Participant characteristics

ID	Sex	Years of experience	Type of hospital	Region
1	Male	38	Tertiary	East Flanders
2	Female	1	Tertiary	Flemish Brabant
3	Male	24	Tertiary	Flemish Brabant
4	Female	21	Secondary	Limburg
5	Female	25	Secondary	West Flanders
6	Male	16	Secondary	Antwerp
7	Male	16	Tertiary	Flemish Brabant
8	Male	4	Secondary	Antwerp
9	Female	3	Secondary	West Flanders
10	Female	30	Secondary	Antwerp
11	Female	2	Secondary	East Flanders
12	Female	3	Secondary	East Flanders
13	Female	3	Secondary	East Flanders

Results

Participants and recruitment

Out of the 47 sent e-mails, 13 geriatricians responded and agreed to participate [Table 1]. Lack of time due to the Covid-pandemic was the main reason for refusing to participate. However, a large variation in age, years of experience and fields of interest was obtained. The duration of the interviews was between 43 and 68 min.

A comprehensive overview of the identified themes is provided in Table 2. In this table, themes were organized into macro level factors (governmental level), meso level factors (region/hospital level) and micro level factors (individual one-on-one level) to get a direct overview of (non-)modifiable factors.

Theme 1 – Geriatricians' role in HF care

All geriatricians reported that HF was highly prevalent in geriatric patients.

> *First of all, it is something that happens very frequently, we see these patients every day. And they are of course very frail people. – P5*

Table 2 Thematic matrix

Thematic matrix: Geriatricians' perceptions about their role in multidisciplinary heart failure care				
Themes			Facilitators	Barriers
Theme 1: Geriatricians' role in HF care	HF management	High HF prevalence	*Feel experienced in HF management*	*Lack of geriatric hospital capacity*
	Geriatric expertise		*Holistic perspective* *Polypharmacy* *Psychosocial approach*	*Attention for patient and caregiver education should be expanded*
Theme 2: Multidisciplinary collaboration 2.1 Collaboration within the hospital	Emergency department		*GST in the ED* *Internal resident in the ED* *The use of a geriatric risk score* *Agreements between cardiologists/geriatricians on hospitalization*	*Lack of structured triage*
	Cardiology department	*Macro level*		*Reimbursement rules of medication and invasive therapy* *Lack of financial incentives for collaboration*
		Meso level	*Added value of co- management* *Financial association with all internists*	*Lack of clear role definition* *Lack of structured cooperation*
		Micro level	*Availability and accessibility* *Mutual respect for their respective expertise*	*Differences in vision in HF management (e.g. orthostatism)*
	Geriatric team	Internal geriatric liason	*Added value of internal liaison*	*Lack of reaching out to internal liaison*
		HF specialist nurses		*Not present at geriatric wards*
		Pharmacists	*Added value of pharmacists in geriatric team*	*Lack of funding*
2.2 Collaboration with primary care		*Macro level*		*Lack of an integrated electronic health record* *Lack of financial incentives for collaboration*
		Meso level		*Lack of interdisciplinary communication*
		Micro level	*Accessibility of geriatricians*	*Lack of GPs' accessibility*
2.3 Transmural care organization		*Macro level*		*Lack of a HF care program*
		Meso level	*The use of the geriatric day hospital for follow-up of high-risk patients*	*Lack of transmural information exchange* *Lack of a transmural care path* *Lack of use of the external geriatric liaison*
		Micro level		*Loss of follow-up after discharge with the GP* *Lack of knowledge of the GP about HF*
Theme 3: Advanced care planning		Valued highly by geriatricians	*Geriatricians' expertise*	*GPs' and cardiologists' hesitancy to approach the subject* *Lack of registration of patients' will*

GST, geriatric support team; ED, emergency department

Because of the high prevalence of HF in the population they cared for, they felt confident in de management of HF.

> *I have the feeling that I know how to handle it, and if it doesn't work out with the classic therapy, then we have the experience to know what next step we can take. And if we don't succeed, we must contact the cardiologist. – P12*

The geriatricians described their role as holistic, taking all aspects of the patients into account.

> *What the GP is in primary care, that is the geriatrician in hospital. An all-round specialist for older people. It is a coaching role, a role of overview. – P1*

As specific expertise they reported the management of polypharmacy, therapy optimalization and attention for psychosocial factors. They felt more attention should be paid to education of the patient and family.

> *Many people know their blood pressure, but not always their weight, and I am shocked about that, certainly in geriatrics. – P6*

One issue was reported repeatedly: the shortage of geriatric beds and a shortage of manpower.

> *The capacity of the geriatrics department is far too small; we are too few in numbers and there are too few departments equipped to admit those people and that will be a huge problem in the future. The HF population just keeps getting bigger. – P6*

Theme 2 – Multidisciplinary collaboration

Collaboration within the hospital

Collaboration with the emergency department

There were large differences in emergency room triage decision making. Participants reported this could be based on the patients' geriatric profile, on a geriatric risk profile score, on the presence of a GST or resident in the emergency department. Sometimes there were no standardized protocols at all.

> *It's a big scandal, It's pure coincidence. (…) Depending on the wind and the position of the moon and the stars, you will end up in one discipline or another. –P8*

> *In theory there are very good scores for this, but in practice they are not used because they are too time-consuming. – P9*

> *We have a GST nurse working in the emergency department, during office hours, so they often look along and they often make suggestions. – P2*

> *There is an internal resident next to the emergency physician, so it is possible that our resident is the first to do the work-up and afterwards consults us and does the admission. – P6*

Two geriatricians indicated that all elderly people with HF ended up in geriatrics, and rightly so.

> *Most of the elderly and certainly the real geriatric patients that come in with HF are admitted to our ward. (…) That changed because we've been a little firm, those people used to be admitted to cardiology and they treat the heart very well, but the rest of that patient… – P5*

Collaboration with cardiologists

All geriatricians stated that they needed to collaborate closely with the cardiologists on HF for echocardiography, diagnosis, and prognosis.

> *In the end they play a role as super specialist for us. – P3*

Co-management with the cardiologists

They reported it is important they set the same goals and the final responsibility for the decisions must be clear.

> *I think you should have the same goals in mind if you want to do co-management, it is difficult to look at the same patient with 2 specialists if they have different treatment goals. – P11*

One issue was the difference in vision about orthostatism which was perceived as a lack of geriatric knowledge of the cardiologists by the participating geriatricians. One geriatrician even suggested a permanent geriatric resident in the cardiology ward to prevent these problems.

> *They must keep up with our vision that the blood pressure is better too high than too low. (.) I think that the cardiologists are not trained for it, it is not their area of interest to conduct a geriatric assessment. – P11*

Some geriatricians believed that a cardio-geriatric co-management may arise. Some had their doubts.

> *It's always difficult to collaborate with the cardiologists because you are both internists, so you get into each other's fields, it is easier with an orthopedist, they cut, and we think. – P11*

> *My vision about the future organization of hospitals, that cardiologists are going to be more of a technical person, and less hospitalization, more our support in a kind of co-management. – P10*

One geriatrician participated in a study with co-management with geriatric outreach to cardiology patients (G-COACH [21, 22]). Despite demonstrably superior patient outcomes, there was no structural financial support to continue.

> *In the end it turned out that the costs are neutral for the government, but the hospital has to integrate, with no extra resources to invest due to the large losses that are allegedly incurred everywhere, at government level the framework must be there to enable multidisciplinary cooperation. – P7*

Financial agreements influenced interdisciplinary collaboration. In some hospitals geriatricians reported to have a large association with all internists. Then there was no financial conflict of interest, which benefited patient care and cooperation.

> *A pitfall is the "it's my patient" attitude. (.) That is the Belgian healthcare system. The cardiologists earn enough, I think, but I still have the impression that there are many who think that those patients should stay with them. We're not the big earners. (.) The health system should be rewritten, so we would*

all earn about the same amount, then you will see a shift. – P5

One issue on macro level was the reimbursement of certain HF medications that could only be done by a cardiologist, not by a geriatrician, and the reimbursement of a coronary artery bypass grafting (CABG) that does not require geriatric advice, unlike a transcatheter aortic valve implantation (TAVI).

It is paradoxical that for less invasive TAVI, people are obliged to visit the geriatrician for reimbursement, but it's only reimbursed after a referral of the and not after a referral of the cardiologist. (.) Another thing, if you qualify for a CABG, you should not go to a geriatrician, a more severe surgery, it is for the surgeon to decide. – P8

Accessibility and involvement

In general, most geriatricians experienced the collaboration as good, appreciating the cardiologists' accessibility.

Most of them do make good reports stating what they would suggest, and they are also quick to reach, so if it's not clear in the report, I'll just give them a call. They also call us easily, so I think it's a smooth collaboration here. – P13

Some geriatricians needed a more structured contact, involvement, and follow-up by the cardiologists.

There is no structural cooperation, we do know each other, so we can easily call or contact each other, but not standardized, there is room for improvement – P7

They feel they should be involved faster, and the geriatric assessment should be applied more often.

Patients who are readmitted repeatedly, they have to look at why, let the geriatrician look at it, is there cognition problem at play, if people do not know they have a have fluid restriction, because they forget, nothing will change essentially. – P2

Collaboration with the geriatric multidisciplinary team

All geriatricians reported to work in a multidisciplinary manner with a geriatric team at their own wards. Differences were reported in the implementation of the internal geriatric liaison. In some hospitals this was activated automatically, in others this had to be requested by the attending physician.

It is important that every patient with HF receives comparable care, that the elderly with HF admitted at cardiology gets the same care. (…) We want to focus on that, to we make sure that regardless of where the patient is, the right care reaches the patient. – P4

Most geriatricians did not work with a nurse specialized in HF.

I think it could be helpful because we know that the knowledge and the empowerment of your patients is pretty bad. – P7

One hospital worked together with clinical pharmacists, with the aim to optimize therapy.

There is a lot of room for optimizing therapy within the cardiovascular area. (…) It is a very useful and pleasant collaboration. (…) We want to focus on the high- risk patients, we don't have the people, the means, nor the time, so we certainly can't see everyone. (…) There is very limited hospital funding for hospital pharmacists, compared to abroad, although we already demonstrated the added value. – P7

Collaboration with primary care

Due to the diversity of the electronic health record systems, they experienced a big loss of information from primary care. They therefore advocated for an integrated patient record.

Those two systems are not similar in any way, not even in the coding. – P10 It would be better if we are able to work around a particular problem in one.

integrated record, were we structure the data together, without having to look it up or send letters to each other – P4

They found the online platforms ("Sumehr", "Vitalink", "CoZo") impractical, with no structure and often not up to date. The system that certain home nurses use *("MyWGK"*) was experienced as much more informative.

You can see the Sumehr, and I think that's too concise, and it certainly doesn't contain all the information that you need to know. It is not good enough, and the medication lists in it are not always up to date. – P6

They reported a lack of interdisciplinary communication, from a geriatrician perspective they admitted they did not reach out enough to the GP during hospitalization.

Communication, that could be better on both sides, a good referral letter, but also contact the GP at important moments during hospitalization, to see what their expectation is, what the patient's expectation is, seek their advice when we doubt ourselves. – P1

I think communication should be easier and faster and I think the time has come to focus on transmural projects and innovation. – P3

They reported difficulties getting through to GPs.

All of us have our work, you're always disturbing each other, in both directions. – P9

Geriatricians tried to be as accessible as possible for the GP. The GP should make more use of this.

I was trained in another hospital, there was a general geriatric helpline for GP's, which they called for advice or for a referral. (…) I hardly get any calls from GPs here. Sometimes that should be more if there are problems. – P2

Transmural care organization

Transmural collaboration with primary care

They felt follow-up and transmural care organization are important to prevent (re)hospitalization and that this is mainly the role of the GP in collaboration with primary care nurses. However, they experienced often that follow-up was inadequate.

The follow-up takes place in primary care, he is responsible for the patient and his family to closely monitor his condition, weight, intake of medication. (…) The general practitioner has an important central role. – P3

I am sometimes amazed about how overloaded some people arrive here, they weigh 15 kilograms too much before an alarm was sounded. – P6

GP's knowledge of HF could be improved, mostly regarding clinical assessment of the fluid balance.

When I get a question about the kidney function, I ask for the fluid status, I don't always get an unequivocal answer, I need to give my advice. (.) I have noticed that there is very little knowledge about the fluid status." – P9

Geriatricians provided a letter of discharge, with advice and target weights, but rarely call the GP. Several geriatricians experienced problems in this transmural information exchange.

We try to keep our letters as concise as possible, especially with the recommendations and the to-dos, and not send extremely long letters. – P4
They never go home without a letter. But the GP must actually read that letter, we send it digitally as well, but they are not waiting at their mailbox to see who is coming home, I think we might have to communicate more bilaterally – P12

They reported the function of an external liaison is lacking.

The external liaison has never taken on any shape or volume. While this was the answer to the question of how we go outside to make the connection to the home situation. – P10

Several geriatricians pleaded for better cooperation with primary care, via a chronic care path. One geriatrician opted for primary care plus. Primary care plus is a new health-care delivery model in the Netherlands, focused on substitution of specialist care in the hospital setting with specialist care in the primary care setting [23].

If we start working together transmurally and streamline and coordinate follow- up, this can have longer and lasting effects for the patient. (.) And you will avoid a lot of hospitalization. (.) You must make agreements, communicate well, and have a good follow-up plan. – P3

Primary care plus is wonderful, I was trained in the Netherlands, there it happens that internists go to the GP to give advice, I certainly think that would be great if that could be possible. – P2

Some geriatricians advocate for a HF care program or convention, in which they see themself play an important role.

We should move away from the classical way of thinking; I earn my living doing consultations. Maybe we can invest that money in a joint process and financing, as is the case for diabetes patients, a kind of convention financing. (…). Eventually the patient should be better and gets a better structured follow-up. – P3

Structure of follow-up

Geriatricians reported their main role is to be guardians of hospitalized geriatric patients, not to be responsible of

follow-up. Therefore, most geriatricians passed on this responsibility of follow-up to the GP or the cardiologist. Some tried to avoid systematic follow-up with the cardiologists.

> *The follow-up is for the GP, if intensive adjustment is needed, they go to the cardiologist. (…) We must limit the efforts of the transfers to a hospital." – P6"We have much fewer consultations, because it is organized in such a way that you cannot see all HF patients. (…) We have few chronic trajectories, we have less of a consultation culture. – P2*

> *We try to avoid follow-up with the cardiologist. (…) If that patient is stable and euvolemic at the time of follow-up, those consultations are useless. – P5*

Most geriatricians exceptionally let their patients return at the day hospital.

> *Depending on the other problems, if we have a complex patient, we will see that patient again at the day hospital. (…) It's not standard, only if we notice that the patient has a need of more intensive follow-up. – P 11*

However, some geriatricians observed a high number of rehospitalizations among HF patients due to the lack of structured follow-up and did set up specific follow-up structures. One geriatrician was working with a joint follow-up consultation with their cardiologists.

> *We started with a combined consultation with our cardiologists, they do the ultrasound, and we do everything else. (…) We take a lot of time for those consultations, and it works very well. (…) This way, we see them much less in the emergency room. – P12*

Two hospitals used their geriatric day hospital for intermittent ambulatory IV diuretic therapy. Others used it to facilitate multidisciplinary work.

> *We have a HF cooperation agreement to keep people out of hospitalization as much as possible through ambulatory intermittent therapy intravenously at the day hospital in collaboration with our cardiologists. – P10*

> *A day hospital where geriatric patients receive all consults in one day, with an endocrinologist, cardiologist, nephrologist, and geriatrician, I think that would be an added value for the quality of care. (…) But you must get it organized logistically. – P7*

One geriatrician started a HF clinic at their geriatric day hospital, where they follow up geriatric HF patients shortly after hospitalization, with a HF specialist nurse, the geriatrician as the main practitioner and the cardiologist as a consultant. Two geriatricians saw this model as an option for the future.

> *We see the patients at the HF clinic 2 or 3 weeks after admission and decide how often they need to come back. (…) We have two types of assessment, we do a HF assessment, and a geriatric assessment. (…) We want to keep patients stable, this way we see a decrease of hospitalizations. (…) This comes across as threatening because it seems that we take over patients, while our model is built as an add- on. – P4*

> *I think there is potential because these are patients with a high risk of hospital readmissions and mortality, but the added value must be demonstrated compared to conventional therapy. – P7*

Theme 3 – Advance care planning

The geriatricians valued advance care planning highly.

> *All those people should have an advance care planning. All of them. – P5*

> *It is one of our roles to discuss with the patient about what he still wants and what he doesn't want, and to discuss what is still feasible for the patient. – P4*

However, they experienced a lack of attention for advance care planning among colleagues.

> *Absent? Far too little attention for advance care planning? – P13*

They saw a bigger role for the GP, who is better placed to discuss this in stable circumstances at home and for the cardiologists.

> *It's not easy when people are acutely bad, to have those conversations, it's easier for the GP in stable circumstances. – P11*

> *The cardiologist has to take more responsibility, the moment he has a very bad ultrasound, to discuss that with the patient. – P13*

The registration of advance care planning with the GP was experienced as problematic.

People think that their paper that they have filled out with their GP, if it does not come along to the hospital, or if it is not registered in our computer system, then we know nothing about it. – P8

Discussion

The aim of this qualitative study with 13 Belgian geriatricians was to shed light on how geriatricians experience multidisciplinary HF care. We found that, since the prevalence of HF among hospitalized patients in geriatrics is high, geriatricians reported to feel confident about HF management and see themselves as the guardians of the patient during hospitalization. Whether a patient with HF is admitted at the cardiology or geriatric ward is decided at the ED. Geriatricians reported that standardized procedures to make this decision were lacking. Geriatricians were satisfied with the collaboration with the cardiologists and valued their role, although they reported differences in vision about dealing with geriatric HF patients, perceived as a lack of geriatric knowledge of the cardiologists. Follow-up and transmural care after hospitalization was valued highly to prevent rehospitalization but most geriatricians didn't see this as their responsibility. They mostly passed on the follow-up to the GP and the cardiologist. Some took this follow-up into their own hands in various forms because of the high rehospitalization numbers and many suggested ways to improve the organization of multidisciplinary HF care. Advance care planning was seen as a very important aspect of HF care, yet they expected more involvement from both the cardiologist and the GP in this matter.

Our study highlights three critical challenges in the multidisciplinary care of geriatric patients with heart failure (HF): ensuring appropriate in-hospital care, improving transitional care, and integrating advanced care planning. These challenges are underpinned by barriers and facilitators identified through our thematic analysis.

Ensuring appropriate in-hospital care

The first challenge concerns how to ensure geriatric HF patients receive optimal in-hospital care delivered by the right healthcare professionals. Decisions regarding ward allocation often begin at the emergency department (ED). Our findings revealed variability in triage practices, influenced by factors such as the availability of geriatric support teams (GSTs), geriatric risk assessments, and agreements between geriatricians and cardiologists. This aligns with prior findings that collaboration between EDs and geriatric departments in Belgium remains suboptimal, with geriatric screening tools often applied inconsistently and only during daytime hours [19, 24]. Standardized triage protocols incorporating geriatric assessments could improve decision-making and minimize negative outcomes for patients.

While geriatricians in our study expressed confidence in managing HF, some participants noted that differences in priorities between geriatricians and cardiologists complicated co-management. For example, geriatricians often emphasized preventing orthostatic hypotension and tailored dietary or medication regimens, whereas cardiologists prioritized strict adherence to HF treatment guidelines. This disparity highlights a need for focused educational campaigns to improve cardiologists' knowledge of geriatric principles [25]. Furthermore, macro-level barriers, such as limited funding for interdisciplinary collaboration, restricted reimbursement of HF medications to prescriptions by cardiologists, and the absence of guidelines tailored to older HF patients, hindered effective multidisciplinary care. Addressing these systemic issues could foster better co-management and improve outcomes for frail geriatric patients [26, 27].

Improving transitional care

The transition from hospital to home represents a vulnerable phase for geriatric HF patients, often leading to high rates of readmission [1, 28]. Our study found that most geriatricians relied on general practitioners (GPs) and cardiologists for post-discharge follow-up, citing insufficient resources and the structural organization of their roles. However, this approach was perceived as inadequate due to inconsistent follow-up practices in primary care. Some geriatricians attempted to bridge this gap by implementing innovative strategies, such as establishing HF clinics within geriatric day hospitals or providing intravenous treatments in ambulatory settings. These initiatives were inspired by successful models like the Spanish "STOP-HF-Clinic," which demonstrated significant reductions in readmissions through early follow-up and multidisciplinary care [29–31].

Joint cardio-geriatric consultations also emerged as a promising approach, with evidence suggesting such models reduce readmissions compared to cardiologist-led follow-up alone [10]. Another innovative model mentioned by participants was "primary care plus," which substitutes hospital-based specialist care with specialist support in primary care settings. Although this model has shown limited improvements in quality of life, it holds potential for reducing healthcare costs and enhancing patient experience [32, 33]. These findings underscore the need for more structured and closely coordinated transitional care pathways for geriatric HF patients, integrating hospital, primary care, and community resources.

Integrating advanced care planning

The third challenge identified in our study is the lack of comprehensive advanced care planning (ACP) for geriatric HF patients. Despite geriatricians' emphasis on ACP as an essential aspect of holistic care, they

noted reluctance among GPs and cardiologists to initiate these discussions. This aligns with previous studies, which attribute such hesitancy to the unpredictable course of HF [14, 35]. However, as Johnson et al. suggest, uncertainty about a patient's prognosis inherently implies the need for proactive planning [36]. Geriatricians advocated for a "whole-system strategic approach" that incorporates clinician training, adequate funding, and IT support to streamline ACP processes [34, 36]. Making ACP a mandatory component of HF care programs could ensure that patients' preferences are respected while improving care coordination and quality of life.

Implications and future directions

Our findings emphasize the importance of addressing barriers at macro, meso, and micro levels to improve multidisciplinary HF care. At the macro level, policy changes are needed to support interdisciplinary collaboration, funding for HF specialist nurses, and reimbursement of essential medications. At the meso level, hospitals should implement standardized triage protocols and foster stronger collaboration between geriatricians and cardiologists. At the micro level, educational initiatives and co-management models can address knowledge gaps and improve coordination.

Future research should focus on:

1. Evaluating the impact of standardized triage protocols on patient outcomes.
2. Investigating the scalability of HF clinics and ambulatory intravenous treatments for geriatric patients.
3. Developing strategies to integrate ACP into routine HF care.

By addressing these challenges, healthcare systems can ensure better continuity of care, reduce readmissions, and improve outcomes for geriatric HF patients.

The interviewer's background as a GP trainee and relative inexperience in qualitative research were potential limitations. However, this was mitigated through training in qualitative research methods and the use of investigator triangulation to ensure rigor in data collection and analysis. Out of the 48 geriatricians who we reached out to, only 13 agreed to participate, a rather low degree of participation, partly due to the Covid-pandemic. The purposive sampling strategy ensured that the most relevant and diverse perspectives were included. Nonetheless, we acknowledge that the views of non-participants may differ and suggest that future research with a larger sample could further validate and expand on our findings. Up to this point, we have examined the experiences of GPs, cardiologists, community pharmacists, and geriatricians with multidisciplinary heart failure care separately [13–15]; however, it would be valuable to bring all stakeholders together. Additionally, the findings of this study are based on interviews with geriatricians working within the healthcare system in Flanders, Belgium, where geriatric care is formally structured. The extent to which geriatricians are involved in multidisciplinary heart failure care might vary significantly in other regions or countries depending on differences in healthcare systems, funding models, and organizational frameworks. For example, the findings related to advanced care planning may be influenced by the unique legal context in Belgium, where euthanasia is legal. This cultural and legal framework may shape geriatricians' perspectives on advanced care planning differently than in countries without similar legislation. Future research could explore these differences to provide a more comprehensive understanding of geriatricians' roles in heart failure care globally.

Conclusion

In this qualitative study geriatricians reported to feel confident about the management of geriatric HF patients and see themselves as the guardians of the patient during hospitalization. Striking differences were observed in the triage of patients at the ED. They were satisfied with the collaboration with the cardiologists, although they reported differences in vision about dealing with geriatric HF patients and a lack of real co-management. Geriatricians tend to rely on the GP and cardiologist for the further follow-up of the patient after discharge. Advance care planning was valued highly but they expected more involvement from both the cardiologist and the GP. Based on these results, our study highlights three key recommendations for optimizing the care of geriatric HF patients. First, the use of standardized methods to triage patients at the ED, in combination with geriatric-cardiologist co-management to ensure that each patient receives appropriate in-hospital care. Secondly, structured and closer transitional follow-up to limit readmission rates. Lastly, inclusion of advance care planning as a mandatory component in every HF program can increase the uptake of this important aspect of care in geriatric patients.

Supplementary Information

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Supplementary Material 1

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Author contributions
MS, BN, WR and BV conceptualized the article and set up the interview guide together. MS trained BN in interview taking. BN recruited the geriatricians and did the interviews. MS and BN analyzed the interviews and drafted the Manuscript. All authors reviewed the Manuscript.

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Data availability
No datasets were generated or analysed during the current study.

Declarations

Ethics approval and consent to participate
We received approval from the Research Ethics Committee of the UZ/KU Leuven (MP018425) on the 7th of December 2021. All participating geriatricians gave their written informed consent prior to participation.

Consent for publication
Not applicable.

Competing interests
The authors declare no competing interests.

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References

1. McDonagh TA, Metra M, Adamo M, Gardner RS, Baumbach A, Bohm M, Burri H, Butler J, Celutkiene J, Chioncel O, et al. 2021 ESC guidelines for the diagnosis and treatment of acute and chronic heart failure. Eur Heart J. 2021;42(36):3599–726.
2. Vorilhon C, Chenaf C, Mulliez A, Pereira B, Clerfond G, Authier N, Jean F, Motreff P, Citron B, Eschalier A, et al. Heart failure prognosis and management in over-80-year-old patients: data from a French National observational retrospective cohort. Eur J Clin Pharmacol. 2015;71(2):251–60.
3. Levy S, Cole G, Pabari P, Dani M, Barton C, Mayet J, McDonagh T, Baxter J, Plymen C. New horizons in cardiogeriatrics: geriatricians and heart failure care-the custard in the tart, not the icing on the cake. Age Ageing. 2021;50(4):1064–8.
4. Alghamdi F, Chan M. Management of heart failure in the elderly. Curr Opin Cardiol. 2017;32(2):217–23.
5. van der Wel MC, Jansen RW, Bakx JC, Bor HH, Olderikkert MG, van Weel C. Non-cardiovascular co-morbidity in elderly patients with heart failure outnumbers cardiovascular co-morbidity. Eur J Heart Fail. 2007;9(6–7):709–15.
6. Wong CY, Chaudhry SI, Desai MM, Krumholz HM. Trends in comorbidity, disability, and polypharmacy in heart failure. Am J Med. 2011;124(2):136–43.
7. Curtis LH, Greiner MA, Hammill BG, Kramer JM, Whellan DJ, Schulman KA, Hernandez AF. Early and long-term outcomes of heart failure in elderly persons, 2001–2005. Arch Intern Med. 2008;168(22):2481–8.
8. NICE Quality Standard QS9. Chronic Heart Failure in adults https://www.nice.org.uk/guidance/qs9/chapter/List-of-quality-statements
9. Ellis G, Gardner M, Tsiachristas A, Langhorne P, Burke O, Harwood RH, Conroy SP, Kircher T, Somme D, Saltvedt I, et al. Comprehensive geriatric assessment for older adults admitted to hospital. Cochrane Database Syst Rev. 2017;9(9):CD006211.
10. Herrero-Torrus M, Badosa N, Roqueta C, Ruiz-Bustillo S, Sole-Gonzalez E, Belarte-Tornero LC, Valdivielso-More S, Vazquez O, Farre N. Randomized controlled trial comparing a multidisciplinary intervention by a geriatrician and a cardiologist to usual care after a heart failure hospitalization in older patients: The SENECOR Study. *J Clin Med* 2022, 11(7).
11. Raat W, Smeets M, Janssens S, Vaes B. Impact of primary care involvement and setting on multidisciplinary heart failure management: a systematic review and meta-analysis. ESC Heart Fail. 2021;8(2):802–18.
12. Smeets M, Van Roy S, Aertgeerts B, Vermandere M, Vaes B. Improving care for heart failure patients in primary care, gps' perceptions: a qualitative evidence synthesis. BMJ Open. 2016;6(11):e013459.
13. Smeets M, Zervas S, Leben H, Vermandere M, Janssens S, Mullens W, Aertgeerts B, Vaes B. General practitioners' perceptions about their role in current and future heart failure care: an exploratory qualitative study. BMC Health Serv Res. 2019;19(1):432.
14. Raat W, Smeets M, Vandewal I, Broekx L, Peters S, Janssens S, Vaes B, Aertgeerts B. Cardiologists' perceptions on multidisciplinary collaboration in heart failure care - a qualitative study. BMC Health Serv Res. 2021;21(1):170.
15. Raat W, Truyts P, Gaillaert J, Van de Putte M, Van der Linden L, Janssens S, Vaes B, Smeets M. Community pharmacists' perceptions on multidisciplinary heart failure care: an exploratory qualitative study. BMC Health Serv Res. 2023;23(1):638.
16. Savin-Baden MHMC. Qualitative research. The essential guide to theory and practice. Routledge; 2023.
17. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int J Qual Health Care: J Int Soc Qual Health Care. 2007;19(6):349–57.
18. Baeyens JP. Belgian care programme for older patients. J Nutr Health Aging. 2010;14(6):474–5.
19. Devriendt E, De Brauwer I, Vandersaenen L, Heeren P, Conroy S, Boland B, Flamaing J, Sabbe M, Milisen K. Geriatric support in the emergency department: a National survey in Belgium. BMC Geriatr. 2017;17(1):68.
20. Dierckx de Casterle B, Gastmans C, Bryon E, Denier Y. QUAGOL: a guide for qualitative data analysis. Int J Nurs Stud. 2012;49(3):360–71.
21. Deschodt M, Van Grootven B, Jeuris A, Devriendt E, Dierckx de Casterle B, Dubois C, Fagard K, Herregods MC, Hornikx M, Meuris B, et al. Geriatric CO-mAnagement for cardiology patients in the hospital (G-COACH): study protocol of a prospective before-after effectiveness-implementation study. BMJ Open. 2018;8(10):e023593.
22. Van Grootven B, Jeuris A, Jonckers M, Devriendt E, Dierckx de Casterle B, Dubois C, Fagard K, Herregods MC, Hornikx M, Meuris B, et al. How to implement geriatric co-management in your hospital? Insights from the G-COACH feasibility study. BMC Geriatr. 2022;22(1):386.
23. Quanjel TCC, Spreeuwenberg MD, Struijs JN, Baan CA, Ruwaard D. Evaluating a Dutch cardiology primary care plus intervention on the triple aim outcomes: study design of a practice-based quantitative and qualitative research. BMC Health Serv Res. 2017;17(1):628.
24. Haseler-Ouart K, Arefian H, Hartmann M, Kwetkat A. Geriatric assessment for older adults admitted to the emergency department: a systematic review and meta-analysis. Exp Gerontol 2021;144:111184.
25. Lelli D, Pedone C, Leosco D, Onder G, Antonelli Incalzi R, Società Italiana di Gerontologia e Geriatria. Management of heart failure: an Italian national survey on fellows/specialists in geriatrics. Aging Clin Exp Res 2020;32(10):2049-55.
26. Dodson JA, Matlock DD, Forman DE. Geriatric cardiology: an emerging discipline. The Can J Cardiol 2016;32(9):1056-64.
27. Boerlage-van Dijk K, Siegers CEP, Wouters N, Faes MC, Verbunt RAM, Geertman JH, et al. Specific recommendations (or lack thereof) for older patients with cardiovascular disease in the current European Society of Cardiology guidelines : from the Dutch Working Group of Geriatric Cardiology of the Netherlands Society of Cardiology (NVVC) and Special Interest Group Geriatric Cardiology of the Netherlands Society for Clinical Geriatrics (NVKG). Neth Heart J 2022;30(12):541-545.
28. Feltner C, Jones CD, Cene CW, Zheng ZJ, Sueta CA, Coker-Schwimmer EJ, et al. Transitional care interventions to prevent readmissions for persons with heart failure: a systematic review and meta-analysis. Ann Intern Med 2014;160(11):774-784.
29. Pacho C, Domingo M, Nunez R, Lupon J, Moliner P, de Antonio M, et al. Early postdischarge STOP-HF clinic reduces 30-day readmissions in old and frail patients with heart failure. Rev Esp Cardiol (Eng Ed) 2017;70(8):631-638.
30. Banerjee P, Tanner G, Williams L. Intravenous diuretic day-care treatment for patients with heart failure. Clin Med (Lond) 2012;12(2):133-136.
31. St Amand A, Taveira TH, Henthorne KE, Wu WC. Ambulatory intravenous diuretic clinic associated with short-term risk reduction in mortality and rehospitalizations in patients discharged with heart failure. R I Med J (2013) 2020;103(9):16-21.
32. Quanjel TCC, Spreeuwenberg MD, Struijs JN, Baan CA, Ruwaard D. Substituting hospital-based outpatient cardiology care: the impact on quality, health and costs. PLoS One 2019;14(5):e0217923.

33. van den Bogaart EHA, Spreeuwenberg MD, Kroese M, van Hoof SJM, Hameleers N, Ruwaard D. Patients' perspectives on a new delivery model in primary care: a propensity score matched analysis of patient-reported outcomes in a Dutch cohort study. J Eval Clin Pract 2021;27(2):344-355.
34. Takahama H, Izumi C. Palliative care for patients with advanced heart failure: when is the optimal timing of advanced care planning? Int J Cardiol 2021;328:143-144.
35. De Vleminck A, Pardon K, Beernaert K, Deschepper R, Houttekier D, Van Audenhove C, et al. Barriers to advance care planning in cancer, heart failure and dementia patients: a focus group study on general practitioners' views and experiences. PLoS One 2014;9(1):e84905.
36. Johnson M, Janssen D. Advance care planning: a 'hard' skill for cardiology clinicians? Heart 2019;105(17):1298-99.

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