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Interprofessional collaboration on oral health for frail home-dwelling older people: a focus group study on needs and barriers experienced by general practitioners and community pharmacists

Natalie Hoste[1,2*], Ellen Baele[1,2], Aster De Vleeschauwer[1,2], Fien Mertens[1], Louise Poppe[3], Barbara Janssens[2] and Peter Pype[1]

Abstract

Background Despite the increased risk of deteriorating oral health among older individuals, dental attendance often declines over time in frail home-dwelling older people (FHOP), resulting in a significant burden of untreated oral disease. Literature highlights the importance of interprofessional collaboration to address oral health problems in ageing societies, emphasising the potential roles of general practitioners (GPs) and pharmacists. However, there is currently limited evidence regarding (a) their engagement in oral health and (b) the perceived needs and barriers in contributing collectively to the oral health of FHOP. Therefore, this study aims to explore the needs and barriers perceived by GPs and pharmacists regarding interprofessional collaboration on oral health for FHOP.

Methods Between February and December 2023, seven focus groups were conducted in two primary care zones in Flanders (Belgium) – five with GPs and two with pharmacists, involving a total of 51 participants. All conversations were recorded, transcribed, and analysed in NVivo using a reflexive thematic approach.

Results The identified barriers and needs for interprofessional collaboration were: limited engagement of GPs and pharmacists in oral health (theme 1), primarily due to a lack of knowledge and responsibility, time constraints, low outcome expectations, low prioritisation by FHOP, and the perception of oral health as a sensitive topic. Recognition of their potential roles was identified as a facilitator. Additionally, there is a need for improved interprofessional relationships (theme 2) and enhanced information exchange on oral health (theme 3), with the absence of a communication platform identified as a significant barrier. Limited accessibility of oral health professionals (OHPs) (theme 4) was also identified as an important barrier, which also contributed to frustrations of GPs towards OHPs.

Conclusions This study provides novel insights into barriers to oral health engagement among GPs and pharmacists (micro level) and calls for improved communication and relationships between OHPs and GPs/pharmacists (meso

*Correspondence:
Natalie Hoste
natalie.hoste@ugent.be

Full list of author information is available at the end of the article

level). Furthermore, it addresses macro-level obstacles to interprofessional collaboration, including a perceived shortage of OHPs, absence of a shared communication platform, and limited resources for preventive care.

Keywords Older adults, Frailty, General practitioners, Community pharmacists, Interprofessional collaboration, Primary care, Qualitative research, Oral care, Oral hygiene

Background

Oral health conditions affect over 44.5% of the global population [1], with older people being disproportionately impacted [2], affecting more than 280 million older individuals [3]. In Western countries, older people prefer to age in place [4, 5], yet over 50% of home-dwelling older people over 60 are affected by multimorbidity [6] and this population is at higher risk of developing frailty [7].

Concerning oral health, this population encounters numerous barriers to accessing oral healthcare [8, 9] and they often struggle to maintain adequate oral hygiene at home due to physical and cognitive decline [10]. Additionally, an often unfavourable diet and the risk of dry mouth associated with polypharmacy – frequently linked to multimorbidity - can further increase oral health problems [11, 12]. However, oral health is a fundamental aspect of overall health and well-being. Oral diseases share common risk factors with other health conditions (e.g., diabetes, obesity, aspiration pneumonia, and cardiovascular disease), and can lead to social isolation and mental health issues, including feelings of shame and lower self-esteem [13]. These problems can, in turn, lead to further deterioration of oral health and quality of life, creating a vicious cycle [14].

In contrast to the observed clinical treatment needs, older adults are less likely to visit the dentist compared to younger individuals [15, 16]. This discrepancy is even more prominent among frail older adults [17, 18] reflecting an inverse care law, stating that some population groups receive less healthcare despite having greater need [19]. In contrast to the number of dental visits, the frequency of visits to general practitioners (GPs) and community pharmacists (hereafter referred to as 'pharmacists') typically increases after the age of 65 [20, 21]. Due to their accessibility and familiarity with this population, GPs and pharmacists are well positioned to promote oral health among community-dwelling older adults. They can facilitate early detection by initiating conversations about oral health, with GPs able to perform oral screenings. Additionally, they can provide advice, make referrals, and oversee medication management – ensuring regimens are current and monitoring systemic effects [22–24].

Current literature also confirms that oral health professionals (OHPs) are often ill-equipped to manage this increasingly medically complex patient group effectively due to the presence of multimorbidity and frailty [25]. A shift away from the isolated approach in OHP education is therefore necessary to ensure the acquisition of essential knowledge, skills and competencies [26].

Recent studies highlight the critical need for interprofessional communication and collaboration between primary care professionals to effectively address the increasing burden of oral health problems in ageing populations. Enhanced collaboration among GPs, pharmacists, and OHPs can improve prevention and early identification of oral health problems in home-dwelling older adults, in whom oral health problems often remain undetected, ensure timely and appropriate interventions, and optimise medication management and patient safety. Moreover, integrating oral health assessments into medical care fosters a more holistic, person-centred approach, which has the potential to prevent systemic diseases and improve overall health outcomes and quality of life [22, 27–29].

However, according to the WHO, oral health is an often neglected area of healthy ageing [4]. At present, there is little evidence of the current engagement of primary care professionals in oral health [26, 30–32]. While some research has explored the overall integration of oral care into primary care [33–35] and the collaboration between primary care professionals and OHPs in general [36–41], only one study in the Netherlands focused on older adults while exploring the barriers and facilitators to integrating oral healthcare into primary care [31, 32].

Therefore, this study aims to investigate the needs and barriers experienced by GPs and pharmacists in relation to interprofessional communication and collaboration on oral health for frail home-dwelling older people (FHOP) in Belgium. The insights gained will facilitate (1) the improvement of interprofessional communication and collaboration by addressing the needs and barriers experienced by GPs and pharmacists, and (2) the formulation of policy recommendations aimed at improving interprofessional collaboration on oral health for frail home-dwelling older people.

Methods

Considering the exploratory nature of the study, we adopted a qualitative approach utilising semi-structured focus groups to explore GPs' and pharmacists' experiences and perspectives. The study was reported according to the Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist [42], with the completed checklist available in Additional file 1.

Setting in Belgium

Patients in Belgium can directly consult primary care professionals, including GPs, pharmacists, and dentists, without the need for referrals. In terms of communication among healthcare providers, there is a shared platform for GPs and medical specialists to exchange patient information. However, OHPs and pharmacists lack access to this system. They can only consult a digital medication scheme, which is often inadequately maintained due to usability issues reported by GPs [43].

Regarding the reimbursement of dental care, check-ups for adults aged 65 and over are primarily covered by mutual insurance funds, typically ranging from 75 to 100%. In addition, a variety of dental treatments for this age group—such as restorations, prostheses, and periodontal therapies— are also partially reimbursed. However, an annual check-up is often a prerequisite to qualify for reimbursement of these treatments. The specific reimbursement rates and conditions vary depending on the mutual insurance fund and any additional individual supplementary insurance policies that older adults may hold [44].

Furthermore, concerns have been raised regarding the workload of general practitioners and dentists [45–47]. However, in 2021, Belgium had 8,926 practising dentists (0.8 per 1000 inhabitants), aligning with the EU-27 average and slightly exceeding the EU-14 average. Additionally, in 2022, unmet dental care needs due to waiting times were just 0.1% in Belgium, which is below the averages for both EU-14 and EU-27. In contrast, Belgium's density of GPs was lower in 2020, at 3.2 per 1,000 inhabitants, compared to EU averages of 4.0 for EU-14 and 3.8 for EU-27 [48]. Nevertheless, only 55% of individuals aged 65 and older and 40% of those aged 75 and older are reported to go on regular dental visits, while over 90% of individuals aged 65 and older had at least one contact with their general practitioner in 2021 [49, 50].

To address the shortage of dentists and shift the focus from curative to preventive care, dental hygienists were introduced in Belgium in 2018 to assist dentists in promoting oral health. With a limited number of dental hygienist graduates ($n = 460$ in February 2024) and ongoing legislative developments, the role and scope of practice for dental hygienists are still evolving within the Belgian healthcare system [51].

Participants

Participants comprised general practitioners and community pharmacists working in two primary care zones (PCZ) in Flanders, Belgium. These are designated areas facilitating collaboration among primary care professionals to deliver coordinated and accessible primary health care services, thereby enhancing the quality of care, improving patient outcomes, and promoting effective health management within the community. The first zone (PCZ Scheldekracht) is more urban, characterised by a higher concentration of health professionals, including OHPs, whereas the second zone (PCZ RITS), is more rural. Eligibility criteria for GPs and pharmacists included: (a) employment within one of the two PCZs, (b) having at least occasional professional contacts with FHOP, and (c) fluency in Dutch. Participants were recruited using purposive and snowball sampling techniques. Purposive sampling was conducted through various channels, including (a) the support of a stakeholder group of organisations dedicated to the care and support of older people, (b) outreach to associations of GPs and pharmacists, and (c) personal outreach to GPs and pharmacists. Snowball sampling was applied by asking focus group participants to suggest additional potential participants.

Data collection

Data were collected from February to December 2023. To ensure that participants felt comfortable speaking freely about their collaboration with other professionals, homogeneous focus groups were organised by discipline. Efforts were made to conduct focus groups in person whenever feasible to enhance participant interaction, with discussions held in accessible locations for all participants such as local service centres. Each discussion was preceded by a brief introduction, completion of informed consent forms, and a demographic questionnaire for participants. This questionnaire gathered information on gender, age, years of experience, work situation, primary care zone, and the extent to which professionals had received oral health training during their education or through additional training. The semi-structured focus groups were guided by an interview guide based on the literature [30, 31] and tailored for each professional group. These guides were refined based on feedback from oral health experts and piloted with a GP and a pharmacist. With respect to frail home-dwelling older people, the following topics were addressed: (1) the importance of oral health within their profession, (2) current interprofessional collaboration practices on oral health, (3) perceived needs and barriers to such collaboration, and (4) the ideal organisation of oral health for this patient group. Complete interview guides are available in Additional file 2 (GPs) and 3 (pharmacists). The discussions were moderated by NH or FM, who were both trained in qualitative research in healthcare. The focus groups were audio recorded, while an observer from the research team (EB, ADV) made additional field notes. We did not pursue data saturation in the strict sense, as we adopted the reflexive thematic approach developed by Braun and Clarke [52]. They indicated that researchers should recognise that meaning is generated through data

interpretation and that the decision to cease data collection is inherently subjective and context-dependent, making the point of data saturation difficult to determine [53]. In this study, data collection continued until the researchers felt that few new themes were emerging.

Data analysis

All focus groups were transcribed verbatim in Word and analysed using NVivo 14 (© QSR International). The analysis employed the reflexive thematic approach by Braun and Clarke [52], which promotes researcher reflexitivity and an iterative process of theme development. This method allows for in-depth data exploration, nuanced interpretation, and the identification of meaningful patterns within complex qualitative datasets. The approach comprises six steps. First, data familiarisation (Step 1) involved repeated reading of the transcripts. In Step 2, initial codes were generated through open coding. The first transcript was independently -coded by four team members with diverse professional backgrounds (NH, EB, ADV, FM–a speech therapist, health promotor, dentist and GP) – and discussed collaboratively under the guidance of an experienced qualitative researcher (FM). The aim of this discussion was not reaching full consensus on the codes, but to explore diverse perspectives through dialogue and reflection. Discussing the transcripts with various disciplinary viewpoints fostered rich insights, which in some cases influenced the interpretation of subsequent transcripts.

Remaining transcripts were first independently coded by two researchers (NH and ADV, EB or FM), after which discrepancies were discussed, again with the aim of recognising different perspectives rather than achieving full agreement. Throughout the analysis, the coding framework was iteratively revisited and refined. In Step 3, codes were aggregated into initial themes by the first author, reflecting larger, more meaningful patterns and Illustrative quotes were selected. The initial themes and quotes were reviewed (Step 4) by the multidisciplinary research team (comprising two GPs, two OHPs, a speech therapist, a psychologist and a health promoter), to ensure robustness through investigator triangulation. Following this discussion, the final themes were defined and assigned descriptive names (Step 5). In the final step (Step 6), the first author integrated the themes into a coherent narrative. Causal loop diagrams were also developed as an intermediary phase in our analytical process, to move beyond unidimensional linear causal thinking. These diagrams were incorporated into the results where they provided added value or where interactions were too complex to clarify through text alone (see Figs. 1 and 2). Finally, the findings were contextualised within the Rainbow Model for Integrated Care, a comprehensive framework specifically developed for primary care, aimed at

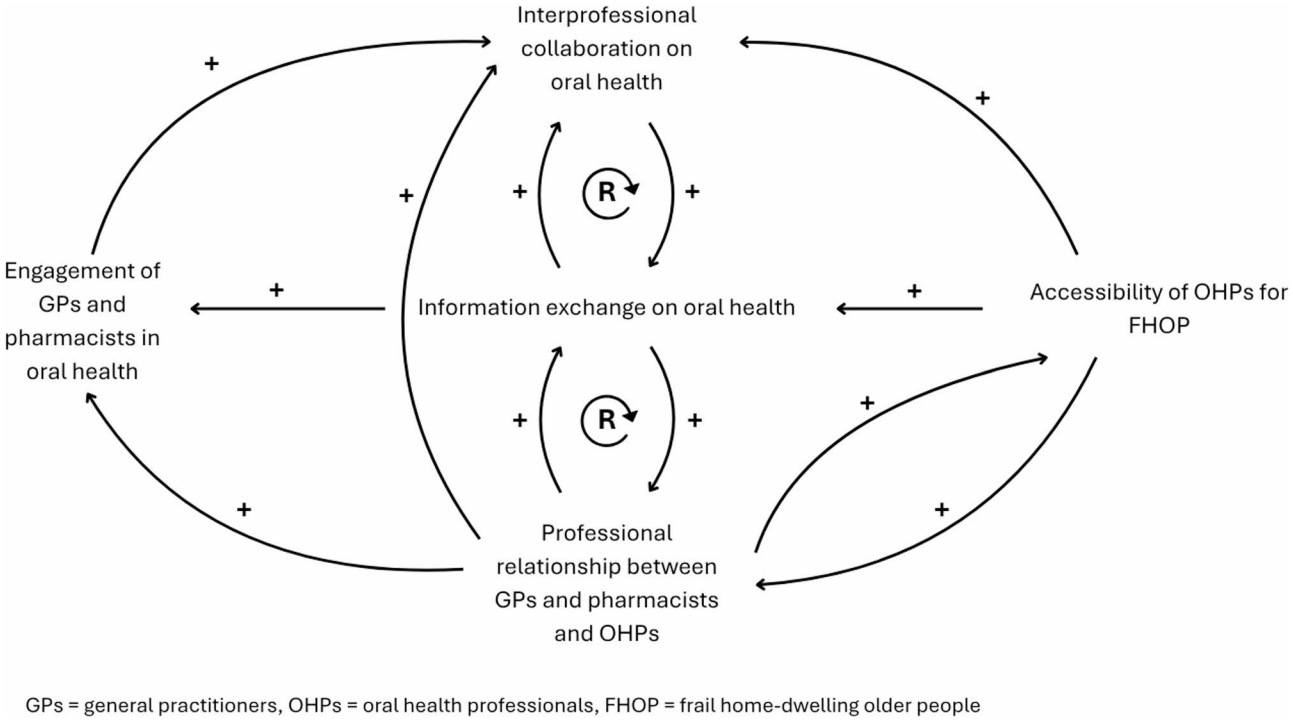

Fig. 1 Causal loop diagram illustrating the interactions among the main themes during focus groups with GPs and community pharmacists on the needs for and barriers to interprofessional collaboration on oral health in FHOP. The positive arrows indicate reinforcing relationships between the themes. A circular arrow was added when a relationship was reciprocal

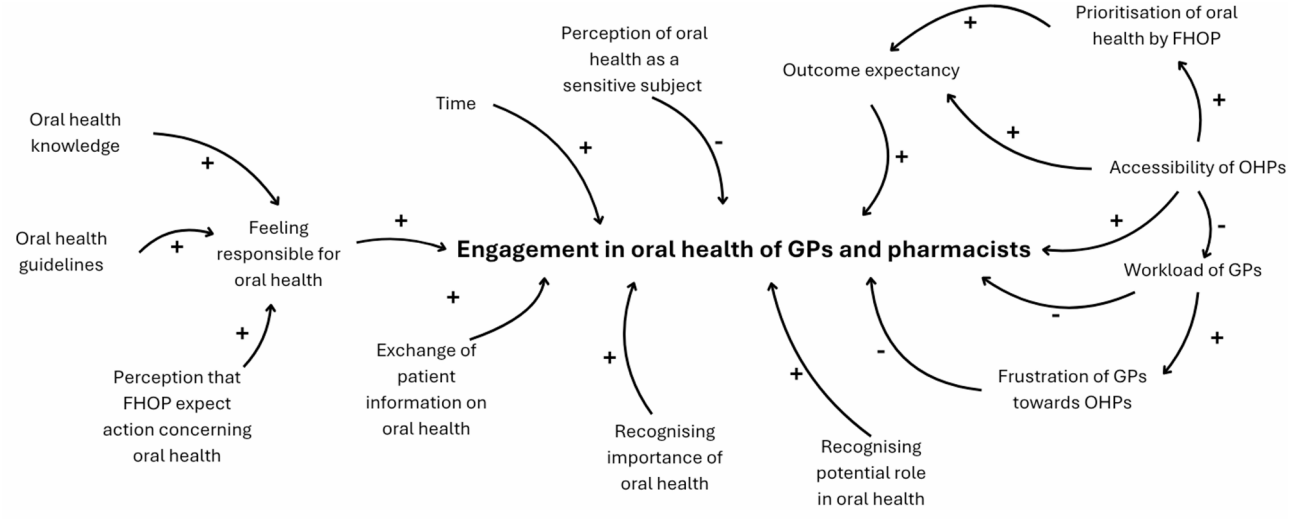

Fig. 2 Causal loop diagram illustrating the interactions between the factors contributing to or hindering the engagement of GPs and pharmacists in the oral health of FHOP. The positive arrows represent relationships that improve the engagement of CPs and GPs. The negative arrows stand for inhibiting relationships

Table 1 Summary of the demographic profiles of the participating gps and community pharmacists

Professional group	**General practitioners (GPs) (*n* = 40)**	**Community Pharmacists (*n* = 11)**
Characteristic	n (%)	n (%)
Gender		
Female	23 (58%)	7 (64%)
Male	17 (42%)	4 (36%)
Primary care zone in Flanders (Belgium)		
PCZ RITS	17 (42,5%)	7 (64%)
PCZ Scheldekracht	23 (57,5%)	4 (36%)
Frequency of professional contact with FHOP		
(Almost) Daily	29 (72,5%)	9 (82%)
Weekly	9 (22,5%)	2 (18%)
Monthly	2 (5%)	0 (0%)
Perception of the extent to which oral health was addressed in their basic training		
Not at all addressed	9 (22,5%)	3 (27%)
Addressed to a limited extent	31 (77,5%)	8 (73%)
Addressed in depth	0 (0%)	0 (0%)
Has followed a supplementary oral health training		
Yes	6 (15%)	2 (18%)
No	34 (85%)	9 (82%)
Years of work experience in current profession		
<5	10 (25%)	0 (0%)
5–10	9 (22,5%)	0 (0%)
11–20	7 (17,5%)	5 (46%)
21–30	5 (12,5%)	4 (36%)
31–40	7 (17,5%)	2 (18%)
>40	2 (5%)	0 (0%)

understanding and enhancing integrated care across various levels of health systems [54].

Results

Seven focus groups were conducted, comprising five with GPs and two with pharmacists, involving a total of 51 participants. The decision to conduct additional focus groups with GPs was based on the feeling that new themes still emerged after three focus groups, unlike with pharmacists, where little new information appeared after two sessions. There were also more disagreements among GPs, while pharmacists seemed more aligned. It should be noted that this is an inherently subjective process that requires interpretation, and there is always potential for new insights [53].

The average sample size per focus group was seven participants, with a minimum of four and a maximum of ten. The average duration of the focus groups was 90 min. Six were conducted in person, while one was held via MS Teams due to the participants' demanding work schedules posing challenges for in-person meetings. Table 1 provides a summary of the demographic profiles of the participants.

The work characteristics of the participants were also assessed. Among the 40 GPs, the majority were employed in monodisciplinary group practices ($n = 19$), followed by those in a multidisciplinary group practices ($n = 11$). Additionally, eight GPs operated solo practices, while two combined one these roles with work in a residential home. Among the 11 pharmacists, the majority were owners of independent pharmacies ($n = 8$), with one

participant employed in an independent pharmacy and two in pharmacies affiliated with larger organisations.

Thematic analysis identified four main themes and various subthemes regarding the needs and barriers to interprofessional communication and collaboration on oral health in FHOP. The main themes were (1) engagement of GPs and pharmacists in oral health, (2) professional relationships between OHPs and both GPs and pharmacists, (3) information exchange on oral health, and (4) accessibility of OHPs. The main themes seemed interrelated, as illustrated in the causal loop diagram in Fig. 1. A summary of the main themes, subthemes, and topics, including illustrative quotes, can be found in Table 2 at the end of this results section.

Theme 1: Engagement of GPs and pharmacists in oral health

The engagement of GPs and pharmacists in oral health was identified as a first prominent theme. Many participants questioned how collaboration on oral health could occur if they were not currently paying attention to it. Figure 2 at the end of this theme illustrates a causal loop diagram depicting the various factors influencing the engagement of GPs and pharmacists.

Current situation

Both GPs and pharmacists reported paying minimal attention to the oral health of frail home-dwelling older people when they had no complaints. Many GPs did not routinely discuss dental visits, nor did they perform preventive oral examinations. Both GPs and pharmacists admitted that they seldom initiated conversations about oral health.

> *GP22: "I think that most general practitioners do not have the reflex to focus on teeth. Did we cover that in our training? No. Are we likely to pay attention to it? I don't think so."*
> *Pharmacist09: "We might address other topics more quickly, because we might see them as potentially more dangerous… Oral health often seems less urgent than something else…".*

In patients with specific health conditions (e.g. diabetes) or symptoms (such as toothache or difficulties in eating), many GPs indicated performing oral examinations or advising dental visits. Some pharmacists recognised the need to pay more attention to oral health when observing frequent purchases of products such as mouthwash or adhesive pastes, but they acknowledged that they rarely did so.

> *Pharmacist09: "There are quite a few older patients who constantly ask for a bottle of mouthwash… perhaps we should address that more and engage in conversation. I think we don't do that enough; at least, I don't."*

When FHOP reported oral health issues, GPs typically investigated potential medical causes and initiated treatment if necessary. Both GPs and pharmacists generally referred FHOP to OHPs for oral health problems. However, due to limited accessibility of OHPs, some pharmacists reported a tendency to refer patients to GPs instead. GPs frequently had to prescribe antibiotics for temporary pain relief. Both GPs and pharmacists indicated that they occasionally made exceptions for FHOP compared to other patients by attempting to arrange appointments with OHPs, although they were less inclined to do so due to previous negative experiences.

> *Pharmacist 10: "We are more likely to refer patients to GPs rather than to the dentist; they are much easier to reach, and otherwise, patients in pain would have to wait for weeks or maybe months".*
> *GP21: "If you try to make an appointment for them, you have to call five or six dental practices, only to be told every time that there is no availability. And when you finally manage to get an appointment, the patient says: Oh no, my daughter can't take me then."*

Barriers, needs and facilitators for engaging in oral health

GPs' and pharmacists' perceptions regarding FHOP and oral health Many GPs and pharmacists reported paying minimal attention to oral health in FHOP, believing it was not a priority for this patient group. Several participants highlighted that FHOP often had other medical issues requiring more urgent attention. Furthermore, they noted that minimal emphasis had been placed on the importance of daily oral hygiene and preventive dental visits during the upbringing of this generation. Additionally, some GPs and pharmacists believed many FHOP feared the pain associated with dental appointments.

> *CP02: "38: "I think those people often have many other medical problems on their minds that are far more urgent than their oral health…".*
> *GP11: "I believe that in this generation, dental care was less embedded than in ours. Those now in their 70s or 80s tended to visit the dentist only when there was a problem."*

Moreover, many GPs and pharmacists expressed the belief that even if accessibility of OHPs were to improve, particularly the oldest FHOP would still refrain from seeking dental care. They indicated that FHOP were unlikely to visit OHPs or change their oral health

Table 2 Summary of the main themes, sub-themes, and topics, along with corresponding illustrative quotes

Theme 1: Engagement of GPs and pharmacists in oral health of FHOP	
Subtheme 1: Current situation	
Low attention of GPs and CPs to oral health	GP22: "I think that most general practitioners do not have the reflex to focus on teeth. Did we cover that in our training? No. Are we likely to pay attention to it? I don't think so." Pharmacist09: "We might address other topics more quickly, because we might see them as potentially more dangerous… Oral health often seems less urgent than something else…" Pharmacist09: "There are quite a few older patients who constantly ask for a bottle of mouthwash… perhaps we should address that more and engage in conversation. I think we don't do that enough; at least, I don't."
Low accessibility of OHPs	Pharmacist 10: "We are more likely to refer patients to GPs rather than to the dentist; they are much easier to reach, and otherwise, patients in pain would have to wait for weeks or maybe months". GP21: "If you try to make an appointment for them, you have to call five or six dental practices, only to be told every time that there is no availability. And when you finally manage to get an appointment, the patient says: Oh no, my daughter can't take me then."
Barriers, needs and facilitators for engaging in oral health, Subtheme 2: GPs and pharmacists perceptions regarding FHOP and oral health	
Perception of low oral health prioritisation in FHOP	CP02: "38: "I think those people often have many other medical problems on their minds that are far more urgent than their oral health…" GP11: "I believe that in this generation, dental care was less embedded than in ours. Those now in their 70 s or 80 s tended to visit the dentist only when there was a problem."
Low outcome expectancy	GP29: "Those older people we're talking about, in my opinion, are a lost cause when it comes to oral health. We can advise them, but if they don't want to go, forget it. We invest our time, but time is money as well, you know."
Raising OH awareness among FHOP	GP30: "You won't be able to engage frail older people in oral health prevention. We're talking about a group you can't be made aware of other issues either".
Subtheme 3: Responsibility of GPs and pharmacists in oral health	
Perception that OH is the responsibility of the OHP	GP20: "We can handle acute issues, and that's part of our role, but prevention in oral health should be the dentist's responsibility, and this responsibility shouldn't rest with
Lack of OH knowledge and training	Pharmacist 11: "I think oral health is not a priority for us because we lack sufficient knowledge about it." GP03: "If you don't have much knowledge, you're not likely to ask questions… When patients ask you something and you have to say you don't know, that's not great".
Outcome expectancy due to limited availability of OHPs	Pharmacist 05: "Dentists are seriously understaffed, but we still want to activate those older people to go to the dentist. Then, we at least need to make sure they have somewhere to go."
Lack of OH guidelines	GP02: "The only guideline I find is that I'm not allowed to prescribe antibiotics for an abscess. One guideline for GPs, that's it…"
Perception that FHOP do not expect oral health action from them	Pharmacist 06: "I don't think that patients expect further action from us. They've received their antibiotics, the abscess and the pain will go away, so they are satisfied."
Subtheme 4: Recognition of the role of GPs and pharmacists in the oral health of FHOP	
Recognition of potential role	Pharmacist 03: "We could play a larger role in monitoring oral health and in motivating and encouraging them [FHOP]. However, we need to be informed; if we don't know anything, we can't do much." GP03: "I believe there is a role for us in preventive care. At the very least, we should ask them if they visit the dentist once a year."
Subtheme 5: Other factors influencing the engagement of GPs and pharmacists in oral health of FHOP	
Lack of time	Pharmacist 09: "I believe it often comes down to a lack of time… they usually come to us with problems that seem more urgent than oral health…" GP04: "Often, there is simply not enough time during a consultation. Frail older people arrive with five complaints at once, and addressing those in fifteen minutes is challenging enough."
Need for increased resources for preventive care	GP21: "I think to be honest that the way our system is set up doesn't allow for preventive work right now because we're already swamped with reactive work. Plus, there's no funding for prevention either."
Perception of OH as a sensitive subject	GP34: "When a patient opens his mouth and you see really poor oral hygiene, it's a bit awkward to say "I can see you have bad oral hygiene, you should go see a dentist". Especially when they came to see you for something else." Pharmacist 01: "I think oral health is an important topic, but for me, it's not always the easiest one to bring up. I think it's about the shame that the patient might feel. They [FHOP] also don't tend to bring up their oral health issues themselves."
Theme 2: Professional relationship between OHPs and both GPs and pharmacists	
Perception that OHPs are not a part of their professional network	GP37: "From our perspective, dentists aren't really part of the landscape with our fellow medical colleagues."

Table 2 (continued)

Theme 1: Engagement of GPs and pharmacists in oral health of FHOP	
Frustration towards OHPs due to their low accessibility	GP34: "We have to handle the urgent cases that dentists no longer have time for. My dentist isn't available, so I have to see you today. That's a very common situation…" GP37: "I feel it's a loss that they don't take on their responsibilities for urgent matters. I think that's the biggest frustration on our part. I would simply prefer that dentists would do their job so that we don't have to deal with teeth. We are overwhelmed with work that really isn't ours."
Need for local introductions with OHPs	GP04: "If we could meet and get to know each other a little bit, it would make it easier to pick up the phone. Right now, you don't know who you're speaking to, and that makes it more difficult." GP33: "We're not asking for more contact with dentists. It's a separate world for us."
Theme 3: Exchanging information on oral health	
Subtheme 1: Current situation	
Sharing patient information on oral health	GP09: "Without a report, you have to rely on what patients tell you, which means you miss a lot of important information and you can't help them retrieve it. This patient group often only understands half of what OHPs are telling them."
Subtheme 2: Needs & barriers for exchanging information	
Lack of shared communication platform	Pharmacist 05: "Once we have that platform, we might be able to communicate better, and we could also follow up on the oral health of these patients, have they been seeing a dentist, what has been done so far,…"
Need for reports	GP27: "We're already overwhelmed with a massive number of reports. […] What can they send that would actually be relevant to us?"
Need for knowing OHPs and fostering a professional relationship	GP04: "If we could meet and get to know each other a little bit, it would make it a lot easier to pick up the phone."
Need for engagement of home nurses	CP04: "I think we should definitely also consider home nurses, because they are often much closer to this patient group…."
Theme 4: Accessibility of OHPs	
Lack of regular dentist	GP27: "For people who don't visit the dentist regularly, it's really hard to get an appointment with the current patient stops…"
Mobility issues and physical problems	GP21: "If you try to make an appointment for them, you have to call five or six dental practices, only to be told every time that there is no availability. And when you finally manage to get an appointment, the patient says: Oh no, my daughter can't take me then."
Fear of costs and pain	Pharmacist 11: "They [FHOP] are especially worried about the costs, as they really don't know what they will have to pay."
Need for strategies to overcome these barriers	GP13: "We should be able to bring them together at a central location, for example in the local service centre, where a dentist can visit. And they should all get an invitation and be picked up at home." GP23: "I believe we need multidisciplinary practices that include a dentist on site to address this problem…"
Addressing the shortage of dentists	Pharmacist 06: "More dentists, that's something we all dream of."
Delegating tasks of OHPs	GP13: "The question is, can't preventive oral care be provided by someone other than the dentist?" GP23: "They [dental hygienists] could visit people at home and carry out an initial screening to assess whether it is necessary to travel to the dentist. Everything okay? Great, then the next visit is in six months."

routines, making it seem a waste of time to focus on oral health if FHOP did not express any complaints.

> *GP29: "Those older people we're talking about, in my opinion, are a lost cause when it comes to oral health. We can advise them, but if they don't want to go, forget it. We invest our time, but time is money as well, you know."*

Both GPs and pharmacists suggested various methods for raising awareness among FHOP but immediately noted the challenges in reaching the oldest FHOP with prevention efforts. Many participants believed engaging FHOP in oral health was particularly difficult due to the numerous perceived barriers.

> *GP30: "You won't be able to engage frail older people in oral health prevention. We're talking about a group you can't be made aware of other issues either".*

Responsibility of GPs and pharmacists in oral health Many GPs and pharmacists also acknowledged that they did not feel responsible for oral health, believing it to be the responsibility of OHPs. They also indicated that they felt less responsible for oral health due to their lack of knowledge in this area, highlighting a need for further training to increase their confidence in identifying and referring oral health issues.

> *GP20: "We can handle acute issues, and that's part of our role, but prevention in oral health should be*

the dentist's responsibility, and this responsibility shouldn't rest with us".
Pharmacist 11: "I think oral health is not a priority for us because we lack sufficient knowledge about it."
GP03: "If you don't have much knowledge, you're not likely to ask questions… When patients ask you something and you have to say you don't know, that's not great".

Some GPs also cited the limited accessibility of OHPs as a reason for feeling less responsible for oral health. Many GPs indicated they were very accessible in terms of availability and affordability, leading FHOP to seek assistance from them for oral health issues. Some pharmacists also tended to refer patients to GPs instead of OHPs. This situation resulted in GPs feeling overwhelmed by the additional workload and the need to prescribe antibiotics against guidelines for temporary pain relief. These frustrations led some GPs to feel entirely disengaged from oral health responsibilities, believing OHPs should take full responsibility for this aspect of patient care. Thus, many GPs and pharmacists emphasised the necessity of improved accessibility, questioning the value of encouraging this target group to seek dental care when they foresee access barriers.

Pharmacist 05: "Dentists are seriously understaffed, but we still want to activate those older people to go to the dentist. Then, we at least need to make sure they have somewhere to go."

Furthermore, some GPs and pharmacists mentioned feeling less responsible due to (1) the lack of guidelines regarding oral health for them and (2) their belief that FHOP do not expect any action from them concerning oral health.

GP02: "The only guideline I find is that I'm not allowed to prescribe antibiotics for an abscess. One guideline for GPs, that's it…".
Pharmacist 06: "I don't think that patients expect further action from us. They've received their antibiotics, the abscess and the pain will go away, so they are satisfied."

Recognition of the role of GPs and pharmacists in the oral health of FHOP Conversely, many GPs and pharmacists recognised the importance of oral health for the overall health and well-being of FHOP, prompting them to acknowledge that they should engage more in oral health. Despite some discussion among GPs regarding their role, most GPs and nearly all pharmacists ultimately acknowledged their potential role in the prevention, identification, and referral of oral health issues, particularly since many FHOP who visit the GPs or pharmacists might not access dental care. Many participants emphasised, however, the necessity for additional knowledge to fulfil this role effectively. Some GPs were convinced that a motivational conversation between the FHOP and their GP would have a greater impact than traditional campaigns. However, other GPs remained convinced that the responsibility lies within FHOP, their informal caregivers, and OHPs.

Pharmacist 03: "We could play a larger role in monitoring oral health and in motivating and encouraging them [FHOP]. However, we need to be informed; if we don't know anything, we can't do much."
GP03: "I believe there is a role for us in preventive care. At the very least, we should ask them if they visit the dentist once a year."

Other factors influencing the engagement of GPs and pharmacists in oral health Many GPs and pharmacists identified a lack of time as a significant barrier to addressing oral health in FHOP, who often present with multiple, more urgent complaints during a single consultation.

Pharmacist 09: "I believe it often comes down to a lack of time… they usually come to us with problems that seem more urgent than oral health…".
GP04: "Often, there is simply not enough time during a consultation. Frail older people arrive with five complaints at once, and addressing those in fifteen minutes is challenging enough."

Consequently, GPs highlighted the need for increased resources for prevention, which could facilitate a greater focus on oral health.

GP21: "I think to be honest that the way our system is set up doesn't allow for preventive work right now because we're already swamped with reactive work. Plus, there's no funding for prevention either."

Additionally, some GPs and pharmacists found it challenging to initiate conversations about oral health without a clear prompt, perceiving it as a sensitive topic. Several participants believed that FHOP may feel embarrassed to address their oral health problems. A few pharmacists added that this hesitation to initiate the conversation was further reinforced by their fear of leading FHOP into lengthy and costly dental treatment pathways.

GP34: "When a patient opens his mouth and you see really poor oral hygiene, it's a bit awkward to say "I can see you have bad oral hygiene, you should go see a dentist". Especially when they came to see you for something else."

Pharmacist 01: "I think oral health is an important topic, but for me, it's not always the easiest one to bring up. I think it's about the shame that the patient might feel. They [FHOP] also don't tend to bring up their oral health issues themselves."

Furthermore, many GPs and pharmacists highlighted the necessity of information exchange on oral health between OHPs and primary care professionals to effectively engage with FHOP's oral health (see theme 3).

Theme 2: Professional relationships between OHPs and both GPs and pharmacists

The professional relationships between OHPs and both GPs and pharmacists were identified as a second recurring theme across the focus groups. Many GPs and pharmacists reported that they did not perceive primary care OHPs as members of their professional network, which hindered information exchange and collaboration. Additionally, the limited accessibility of OHPs, along with the resulting frustrations among GPs, further complicated these professional dynamics. Some pharmacists noted that they are less familiar with patients' OHPs, as individuals often travel further to find an OHP who still accepts new patients. Moreover, some participants indicated that OHPs tended to engage less with other professionals groups compared to other primary care professionals.

GP37: "From our perspective, dentists aren't really part of the landscape with our fellow medical colleagues."

Some GPs indicated that their frustrations towards OHPs contributed to a diminished sense of responsibility, resulting in lower engagement in oral health. GPs and pharmacists added that not knowing OHPs acted as a barrier to effective information exchange.

To improve professional relationships with OHPs, many pharmacists and some GPs suggested local introductions or interprofessional trainings to enhance mutual understanding of each other's roles and perspectives regarding oral health. A few GPs emphasised that clear interprofessional agreements could facilitate smoother collaboration, citing successful collaboration with dermatologists, despite having similar waiting times to OHPS. However, other GPs expressed a lack of interest in further engagement with OHPs.

GP04: "If we could meet and get to know each other a little bit, it would make it easier to pick up the phone. Right now, you don't know who you're speaking to, and that makes it more difficult."
GP33: "We're not asking for more contact with dentists. It's a separate world for us."

Theme 3: Exchanging information on oral health

Current situation

A third theme was the necessity for information exchange to facilitate effective collaboration on oral health. Many GPs and pharmacists indicated that, aside from necessary referrals, communication regarding oral health was very rare.

The oral health-related patient information received by GPs and pharmacists primarily originated from FHOP themselves. Many GPs noted they did not receive reports about dental visits from primary care OHPs, unlike secondary OHPs, from whom they did receive such reports. Furthermore, GPs indicated that oral health rarely emerged as a topic in multidisciplinary consultations, and OHPs were seldom included in these discussions. While many GPs often exchanged patient information with home care nurses, this rarely pertained to oral health. Moreover, nearly all pharmacists highlighted their inability to access patient information online. Some GPs and pharmacists emphasised that they are often unaware of the oral health status of FHOP, as older people are not inclined to share this information with them.

GP09: "Without a report, you have to rely on what patients tell you, which means you miss a lot of important information and you can't help them retrieve it. This patient group often only understands half of what OHPs are telling them."

When patient information concerning the oral health of FHOP was shared, it was usually initiated by the GP. A few GPs indicated that they were occasionally contacted by OHPs to discuss medication prior to dental treatments.

When seeking information on oral health, many GPs and pharmacists were more inclined to use online search engines like Google rather than consulting local OHPs. Some pharmacists added that much of the information they received was heavily influenced by commercial interests. Many participants acknowledged that while medical-pharmaceutical meetings often occurred where various topics were discussed, oral health was never one of them, and primary care OHPs were never involved.

Needs & barriers for exchanging information

To enhance communication and collaboration regarding oral health, GPs and pharmacists stressed the necessity for a communication platform that would facilitate the exchange of patient information with OHPs and other primary care professionals. Many pharmacists reported a lack of access to existing communication platforms, and both GPs and pharmacists believed that OHPs faced similar limitations. Pharmacists highlighted the importance of access to these platforms and expressed a willingness

to share medication information to alleviate the burden on busy GPs.

Pharmacist 05: "Once we have that platform, we might be able to communicate better, and we could also follow up on the oral health of these patients, have they been seeing a dentist, what has been done so far,…."

When asked about the information needed for effective collaboration on oral health, many GPs and some pharmacists indicated a desire for alerts when FHOP had not visited an OHP for several years. This is particularly important for FHOP who are not actively engaged in the oral health system, as it presents an opportunity to initiate discussions about their oral health. In addition, many GPs and pharmacists underscored the vital role of home care providers. Their frequent and prolonged interactions with FHOP enable them to identify oral health issues at an earlier stage and notify GPs. Additionally, some GPs and pharmacists called for guidelines regarding brief reports following FHOPs' visits to OHPs, especially after referrals, to improve follow-up on FHOP's oral health, as they questioned the completeness and reliability of information provided by FHOP after dental visits.

GP11: "Actually, health insurance funds should check who hasn't been to the dentist in a while and then a warning should appear in our patient records. That would make it much easier to follow up and start the conversation."
CP04: "I think we should definitely also consider home nurses, because they are often much closer to this patient group…."

In contrast, some GPs who had previously expressed significant frustrations with OHPs and did not feel responsible for oral health indicated that they did not find this necessary, citing the already overwhelming volume of reports from various healthcare professionals.

GP27: "We're already overwhelmed with a massive number of reports. […] What can they send that would actually be relevant to us?"

Nevertheless, many GPs and pharmacists noted that knowing OHPs and cultivating a good professional relationship would ensure smoother information exchange.

GP04: "If we could meet and get to know each other a little bit, it would make it a lot easier to pick up the phone."

Theme 4: Accessibility of OHPs

Many GPs and pharmacists identified limited access to oral health care as a significant barrier to interprofessional collaboration on oral health for FHOP. The majority of the participants noted that it is generally difficult to find an available dentist when needed. For this patient group, however, access to dental care was even more challenging, as they often lacked a regular dentist. Consequently, many OHPs refused to accept them as patients, having reached their capacity and not accepting new ones. Additionally, mobility issues and physical problems among FHOP, along with doubts about the affordability of dental care – shared by both FHOP and participants - further contributed to this issue.

GP27: "For people who don't visit the dentist regularly, it's really hard to get an appointment with the current patient stops…."
Pharmacist 11: "They [FHOP] are especially worried about the costs, as they really don't know what they will have to pay."

Participants offered various suggestions to address these problems. First, many participants emphasised the need to address the shortage of dentists. Second, tasks that do not necessarily require a dentist's expertise should be delegated to dental hygienists. Third, some GPs suggested that OHPs reserve slots for emergencies, and not just for regular patients. Fourth, GPs and pharmacists indicated that oral health care should be affordable and that greater transparency regarding costs is essential so that primary care professionals can clarify misunderstandings about costs. Finally, many participants noted the need to explore strategies to overcome mobility barriers for this target group, including home visits by OHPs, the regular presence of OHPs at local service centres, and the inclusion of OHPs in multidisciplinary practices.

Pharmacist 06: "More dentists, that's something we all dream of."
GP13: "The question is, can't preventive oral care be provided by someone other than the dentist?"
GP23: "They [dental hygienists] could visit people at home and carry out an initial screening to assess whether it is necessary to travel to the dentist. Everything okay? Great, then the next visit is in six months."

Discussion

The findings of this study identified several needs and barriers experienced by GPs and pharmacists regarding interprofessional communication and collaboration on oral health for FHOP. The key themes were (1) engagement of GPs and pharmacists in oral health,

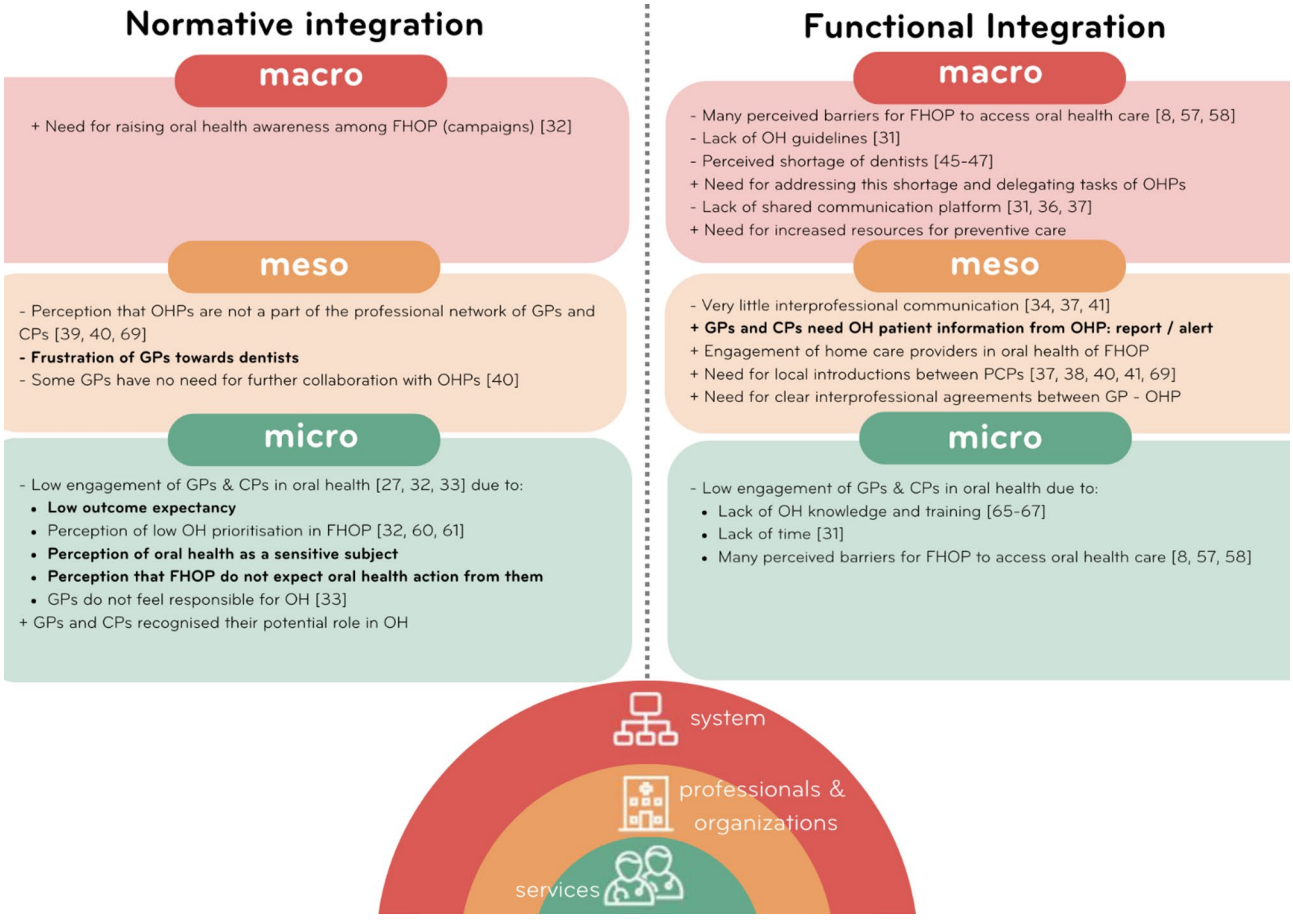

Fig. 3 Needs and barriers for interprofessional collaboration on oral health in FHOP experienced by GPs and pharmacists. The findings from the focus groups are classified according to the Rainbow Model for Integrated Care, highlighting needs (+) and barriers (-) across the micro, meso, and macro levels, as well as distinguishing normative aspects (e.g. shared values, a common mission and vision) from functional aspects (these are practical and operational processes and structures). References were added to findings that align with literature and new or noteworthy findings are indicated in bold

(2) professional relationships among OHPS and both GPs and pharmacists, (3) exchanging information on oral health, and (4) accessibility of OHPs. Each theme also highlighted potential facilitators and specific needs that could enhance collaboration and improve oral health outcomes for FHOP.

This study reveals new insights into the barriers and needs related to normative integration at both micro and meso levels, extending beyond the well-documented functional integration challenges. Specifically, it uncovers factors that hinder GPs and pharmacists from engaging in oral health and elucidates the dynamics influencing interprofessional relationships. This supports earlier literature indicating that interventions should not only target the functional level, but that a counterpart at the normative level is needed [55, 56]. Furthermore, the findings of these study show the interconnectedness of barriers across different levels – for instance, the absence of oral health guidelines at the macro level (functional integration) appears to be linked to GPs and pharmacists' perceptions of responsibility at the micro level (normative integration). These findings underscore the importance of adopting a comprehensive, multi-level approach when designing interventions, recognising the interplay between different levels of integration.

Comparison with existing literature

To facilitate the comparison with the existing literature, we summarised the findings in Fig. 3 in accordance with the Rainbow Model for Integrated Care [54]. In the remainder of the discussion, the focus will be primarily on the new or noteworthy findings indicated in bold.

At the micro level, many participants in our study indicated that before interprofessional collaboration on oral health can occur, they must first engage in oral health. Most participants reported that they currently pay very little attention to oral health and provided various reasons for their lack of engagement (e.g. low prioritisation of oral health in FHOP, lack of time), which have been previously reported [27, 32, 33].

This study identified additional factors contributing to the reluctance of GPs and pharmacists to engage in oral health. First, the participants expressed *low outcome expectations* regarding the effectiveness of efforts to encourage FHOP to visit OHPs. This scepticism is partly attributed to the numerous barriers faced by FHOP in accessing oral healthcare, which have been extensively discussed in the literature [8, 57, 58].

Despite this, many participants suggested that even if these barriers were completely removed, FHOP would still be unlikely to seek dental care. Previous research has shown that FHOP are challenging to reach with preventive measures [59] and that they do not prioritise oral health [32, 60, 61]. Participants in our study emphasised this issue more strongly, claiming that the oldest FHOP are, in fact, a lost cause. Nevertheless, a recent study indicates that nursing home residents receiving intramural professional oral healthcare are generally satisfied but would not visit a dentist if transportation were required [62]. This suggests that addressing mobility barriers could potentially enhance access to dental care for older adults.

Second, our study reveals that some GPs and pharmacists hesitate to initiate conversations about oral health because they find it a *sensitive topic* to discuss when FHOP have no complaints or specific conditions. They assume that FHOP would not appreciate having a GP starting a conversation about their poor oral hygiene. This may be a matter of perception; it is possible that some FHOP would appreciate primary care professionals initiating discussions about so-called sensitive topics, including oral health, which aligns with findings from previous studies [63, 64].

Third, some GPs in our study stated that they *did not feel responsible* for oral health, a sentiment previously reported by other GPs [33]. It is important to highlight that especially the GPs in our study were situated along a spectrum. Most pharmacists and some GPs acknowledged their potential role in oral health, whereas other GPs felt absolutely no responsibility for it. The latter group was usually less engaged in prevention overall and/or experienced frustrations with OHPs. Therefore, a differentiated approach will be necessary to engage all primary care professionals.

GPs and pharmacists reported that their sense of responsibility was strongly affected by their previously noted lack of oral health knowledge, which has been documented in literature [65–67]. Additionally, they felt no expectations placed upon them regarding oral health. They believed that FHOP did not anticipate any action from them in this domain and there were no top-down guidelines regarding oral health [32]. However, an earlier study on diabetes care indicated that healthcare professionals' perceptions of expectations to engage in specific behaviours were strongly associated with their intention, which in turn predicted their disease management behaviours [68]. It would be valuable to investigate whether establishing such expectations could similarly influence GPs' and pharmacists' behaviours concerning oral health management.

At the meso level, in terms of normative integration, our study found that GPs' frustrations with OHPs affect their sense of oral health responsibility. Recent research indicated a lack of professional relationships between OHPs and both GPs and pharmacists, with both viewing their fields as separate [39, 40, 69]. In one of these studies, GPs indicated that OHPs adequately performed their duties and were satisfied with the limited collaboration, as long as OHPs fulfilled their roles [40]. However, many GPs in our study believed that OHPs were not effectively fulfilling their responsibilities, leading to frustration. This discrepancy with other studies may be linked to the perceived shortage of GPs and OHPs in Belgium [45–47]. GPs in our study felt pressured to take on tasks from OHPs while already feeling overwhelmed by their own responsibilities.

Additionally, at the meso level, our study supported previous research highlighting the minimal communication between OHPs and both general practitioners and pharmacists [34, 37, 41]. While GPs and pharmacists in this study reported that establishing interprofessional agreements with OHPs seemed impossible due to their limited accessibility, GPs expressed their ability to collaborate effectively with other healthcare specialists despite their similar demanding schedules.

Prior studies have also emphasised the importance of personal acquaintance in enhancing collaboration and have advocated for local introductions among professionals [37, 38, 40, 41, 69] as well as for interprofessional education [37, 40]. Moreover, understanding each other's roles seems crucial for fostering mutual understanding among primary care professionals [70, 71], and much of the criticism between GPs and OHPs appeared to be rooted in perceived knowledge deficits [69]. Most participants in our study suggested that local introductions could improve interprofessional relationships and facilitate communication, although only a few indicated that the education of GPs pharmacists and OHPs should be integrated. Given that our participants were all active professionals rather than students, they may have reflected primarily on how interprofessional collaboration could be improved in their own context.

Regarding functional integration, GPs and pharmacists in our study noted that monitoring the oral health of FHOP would be more manageable if OHPs shared relevant patient information. To facilitate this, all primary care professionals should have access to a shared communication platform. Participants highlighted that receiving alerts when FHOP had not consulted an OHP

for several years would be advantageous because patient information related to oral health was rarely provided, leaving GPs and pharmacists reliant on the information FHOP share themselves. Previous studies have noted similar indirect communication, where patients act as intermediaries [69]. Participants in our study expressed concerns about the reliability of such information, and recent literature suggests that FHOP may feel uncertain about managing medication details [72] and struggle to recall information [73]. This highlights the inadequacy of expecting FHOP to report their oral health status directly to other primary care professionals.

At the macro level, this study primarily reinforces findings from earlier research. Our participants identified the lack of a shared communication platform as a significant barrier to interprofessional collaboration [31, 37, 38]. Moreover, they stressed the necessity for increased resources for prevention and oral health campaigns, as well as the removal of barriers preventing FHOP from accessing oral health care [8, 57, 58].

Although the perceived shortage of dentists was a recurring theme in every focus group, data do not appear to confirm this shortage [48]. It is crucial to acknowledge methodological issues to enable accurate comparisons, as these studies often cannot rely on the most current data. For instance, In Belgium, some retired dentists are still counted among the active dental workforce. Furthermore, differing task distributions in other countries complicate the comparison regarding the desired number of dentists. Additionally, we may question whether the figures on 'unmet dental care needs' reflect a lack of prioritisation of oral health rather than an actual absence of treatment needs.

Strengths and limitations

The qualitative approach facilitated in-depth discussions and provided diverse insights into this complex topic. Although the lack of member checks may limit the trustworthiness of the findings, we aimed to mitigate this concern through researcher triangulation. Recruitment was restricted to two primary care zones in Belgium, with only 11 pharmacists participating, potentially affecting data richness and transferability of the perspectives obtained.

Additionally, the voluntary nature of focus group participation may have introduced bias by attracting individuals with a pre-existing interest in the research topic. Furthermore, while the homogeneous focus groups aimed to facilitate in-depth and open discussions on interprofessional collaboration, the presence of colleagues from the same profession may have increased the risk of socially desirable responses. Despite these limitations, this study's results are consistent with existing literature, indicating a reasonable level of transferability of the findings.

Recommendations for practice

Operational level

The active engagement of GPs and pharmacists in the oral health of FHOP is desirable, as this patient group often consults OHPs less frequently, believing it unnecessary [15, 17, 18], and tend not to initiate discussions about their oral health with GPs and pharmacists. Consequently, GPs could play an important role in monitoring FHOPs' oral health, and both GPs and pharmacists could initiate oral health conversations, make referrals to OHPs and share relevant patient information with them when needed. OHPs should provide follow-up reports to facilitate ongoing care. The possible contribution of home care professionals, who typically spend more time with FHOP, should also be acknowledged. Furthermore, establishing personal contact between OHPs and other primary care professionals could be an important step toward enhancing interprofessional relationships and collaboration.

Education

Providing additional oral health training for GPs and pharmacists could enhance their oral health knowledge and could possibly increase their confidence and sense of responsibility in addressing oral health issues.

Policy

Policymakers should consider allocating additional resources to preventive care, enabling primary care professionals to dedicate sufficient time to oral health and overall prevention, with particular attention to vulnerable subpopulations facing specific challenges. Furthermore, it could be helpful if GPs and pharmacists felt a sense of obligation to engage in oral health, which could possibly be encouraged through top-down guidelines and informing the community that GPs and pharmacists can also be consulted for oral health concerns. Raising public awareness about the significance of oral health may also encourage individuals to prioritise maintaining good oral health. Additionally, establishing an overarching communication platform - including alerts about FHOP who do not visit the dentist - will facilitate improved follow-up and interaction between primary care professionals and OHPs. Finally, attention should be given to expanding the role of dental hygienists in preventive care and implementing other strategies to address the perceived shortage of dentists.

Intervention development

This study confirms the importance of considering both normative and functional integration when developing effective interventions to enhance the integration of oral

health care into primary care. Furthermore, it is critical to recognise that interventions at one level can significantly affect other levels. Therefore, a thorough examination of the (vertical and horizontal) effects of interventions is essential for establishing an effective integration strategy.

Directions for future research

Based on the discussion in this paper, several directions for future research can be suggested. First, further investigation and quantification of the extent to which identified needs and barriers influence engagement and interprofessional collaboration regarding oral health are needed to inform targeted interventions. Second, examining whether FHOPs' expectations of oral health actions by GPs and pharmacists influence the behaviour of these professionals could offer valuable understanding of potential facilitators. Third, exploring disparities in successful collaborations with other specialists could provide valuable insights applicable to enhancing cooperation with OHPs. Finally, it would be interesting to examine the needs and barriers experienced by OHPs and compare these findings with the current study.

Conclusion

There is a need for coordinated efforts across micro-, meso-, and macrolevels to enhance interprofessional collaboration on oral health for frail home-dwelling older people, with the aim of achieving functional and normative integration of oral health into primary care. A proactive engagement of GPs and pharmacists in oral health care is an important initial step. Furthermore, policymakers should consider (1) addressing the perceived shortage of dentists, (2) establishing shared communication platforms, and (3) allocating more resources to preventive care and public awareness initiatives concerning oral health.

Abbreviations

OHP	Oral health professional
GP	General practitioner
FHOP	Frail home-dwelling older people

Supplementary Information

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Supplementary Material 1.

Supplementary Material 2.

Supplementary Material 3.

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Authors' contributions

FM, LP, BJ, and PP provided supervision and conceptualised the study alongside NH. EB, ADV, FM, LP, BJ, PP, and NH developed the methodology. EB, ADV, FM, and NH collected the data and conducted the thematic analysis. NH managed the software, prepared the original draft of the manuscript, and created the visualisations. All authors reviewed the manuscript, with NH handling the editing.

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Data availability

The datasets generated and analysed during this study are not publicly available owing to the potential for participants to be identified. The pseudonymised transcripts are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate

Ethical approval for this study was given by an independent Committee for Medical Ethics of the Ghent University Hospital (reference number ONZ-2022-0369). The study is conducted in accordance with the guidelines for Good Clinical Practice and the Declaration of Helsinki, established to protect individuals participating in clinical studies. After receiving oral and written information about the study, all participants provided their written consent for participation and for recording the focus groups.

Consent for publication

This is not applicable. Before the focus groups were conducted, informed consent was obtained from all participants in writing. The participants agreed to share their data that were pseudonymised in the study. Information about their privacy and how their data would be stored was included in the informed consent file.

Competing interests

The authors declare no competing interests.

Author details

[1]Department of Public Health and Primary Care, Centre for Interprofessional Collaboration in Education, Research and Practice, Faculty of Medicine and Health Sciences, Ghent University, Ghent, Belgium
[2]Department of Oral Health Sciences, Faculty of Medicine and Health Sciences, ELOHA (Equal Lifelong Oral Health for All) research group, Ghent University, Ghent, Belgium
[3]Department of Public Health and Primary Care, Faculty of Medicine and Health Sciences, Ghent University, Ghent, Belgium

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