Received: 14 May 2020 | Revised: 5 October 2020 | Accepted: 12 December 2020

DOI: 10.1111/ger.12525

ORIGINAL ARTICLE

Gerodontology WILEY

Barriers and Facilitators to integrate Oral Health care for Older Adults in General (Basic) Care in East Netherlands. Part 2 Functional Integration

D. Niesten[1] | A.E. Gerritsen[1] | V. Leve[2]

[1]College of Dental Sciences, Radboud University Medical Center, Nijmegen, The Netherlands

[2]Institut für Allgemeinmedizin, Heinrich-Heine-Universität Düsseldorf, Medizinische Fakultät, Germany

Correspondence
Dominique Niesten, Radboud University Medical Center, College of Dental Sciences, 9101, 6500 HB, Nijmegen, The Netherlands.
Email: dominique.niesten@radboudumc.nl

Funding information
European Union Interreg program Deutschland-Nederland, Grant/Award Number: 203072

Abstract

Objective: to synthesise a framework of barriers and facilitators in the functional integration of oral health care (OHC) into general health care for frail older adults at macro (system), meso (organisation and interprofessional integration) and micro (clinical practice) levels.

Background: Identification of these barriers and facilitators is expected to promote better and more appropriate care.

Methods: For this qualitative study, comprising 41 participants, representatives of 10 different groups of (professional) care providers, and OHC receivers (home-dwelling and nursing-home patients) were interviewed. Transcripts of the in-depth, topic-guided interviews were thematically analysed. In a subsequent workshop with 52 stakeholders, results and interpretations were discussed and refined.

Results: Two themes were identified: (1) compartmentalised care systems and (2) poor interprofessional and communication infrastructure. Barriers related to (1) included lack of integrative policies and compartmentalised healthcare education (macro level); poor embedding of OHC in care procedures, instruments and guidelines (meso level); and poor interprofessional skills (micro level). Barriers related to (2) included poor financial incentives for collaborative practices (macro level) and badly connected ICT systems (meso level). Identified facilitators included integration of an OHC professional into care teams, and interdisciplinary consultations (meso level); and integration of OHC in individual care plans (micro level).

Conclusion: In The Netherlands, OHC for older people is at best poorly integrated into general care practices. Barriers and facilitators are interconnected across macro-, meso- and micro levels and between normative and functional domains and are mainly related to compartmentalisation at all levels and to poor interprofessional and communication infrastructure.

KEYWORDS

functional integration, healthcare integration, interprofessional, older people, oral health care

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.
© 2020 The Authors. *Gerodontology* published by Gerodontology Association and John Wiley & Sons Ltd.

1 | INTRODUCTION

Oral diseases share risk factors with other diseases that can result in poor health, such as tobacco and alcohol use, poor diet and poor hygiene. Other common risk factors to both oral and general health lie in social determinants like low or poor socioeconomic status, income, living environment, working conditions, education, health behaviour and access to health services.[1,2] This common risk factor approach makes a case for the integration of oral health care (OHC) into general health care.[3] Especially for frail older people, this could bring distinct benefits, since these elders often have multiple diseases and/or are institutionalised and hence use many health services, while their use of dental services is limited, despite their often poor oral health.[4] Moreover, integration of OHC into general care could expand the workforce that addresses oral health and improve patient health outcomes,[5] for example through GPs and nurses signalling OH problems and through nurses and GP assistants contributing to OH promotion.

So far, only a few European studies have addressed the integration of OHC into general health care and only one in The Netherlands in nursing-home settings.[8] In addition, few European, and no Dutch studies, have addressed this topic in the extramural setting, that is the home situation. Yet, it is generally acknowledged that delivery of OHC to home-dwelling frail elders in the home situation is more beneficial, because these elders are far more numerous than nursing-home residents and generally have a longer life expectancy. Hence, severe decline of oral health can be prevented for this group of people.

Since effective healthcare integration is greatly dependent on the healthcare system used and specific context (eg the infrastructure for collaboration, communication and referral), it requires solutions, and therefore assessment, at a local level.[6]

Hence, in accordance with the aim of improving OHC services for older adults in extra- and intramural settings in East Netherlands, the guiding question of the underlying study was: what are barriers and facilitators to integration of OHC into general (basic) health care for (frail) older adults?

Following the Rainbow Model of Integrated Care by Valentijn,[7] we distinguished between the domains of normative and functional integration at three levels: macro (political/system), meso (organisational and professional) and micro (clinical service). Functional integration relates to "mechanisms by which financing, information and management modalities are linked to achieve optimum value to the system".[7] Normative integration relates to "the development and maintenance of a common frame of reference (ie shared mission, vision, values and culture) between organisations, professional groups and individuals".[7] The findings in relation to the normative domain are presented in Part 1 of this study, with the main conclusions that normative barriers to OHC integration are mainly related to 1) a compartmentalised care culture in which OHC and general health care are seen as two separate realms, and caregivers and patients are insufficiently aware of the interaction and interdependence between the two; and 2) related low prioritisation, and poor awareness of and attitude towards oral health (care) at macro-, meso- and micro levels. The present paper (Part 2) presents the barriers and facilitators that affect integrated OHC provision in the functional domain.

2 | METHODS

The methodology used for this study, including the ensuring of qualitative rigor and a reflection on the researchers' contributions, is described extensively in Part 1 of this study. Below, we provide a summary.

We carried out a qualitative study through open-ended interviews with 10 groups of stakeholders: dentists, dental hygienists, home nurses, nursing-home nurses, managers (of nursing homes and dental care chains), general practitioners, geriatricians, patients (in

TABLE 1 Main methodological steps

Phase	Description
Preparation	Step 1. Preparing topic guide, informed by the Rainbow Model of Integrative Care (DN, AG, VL) Step 2. Purposive recruitment and selection of respondents (DN, AG)
Interviews	Step 3. Qualitative Interviews with representatives of 10 stakeholder groups, held and audiotaped by DN and AG and guided by a topic list. Additional interview notes taken.
Thematic analysis	Step 4. Transcription of interviews and notes (dental student) Step 5. Hand coding of text segments (DN, AG), supported by Atlas.ti8 Step 6. Discussion and validation of coded segments and code categories (DN, AG, VL) Step 7. Deriving themes and first results (model guided, semi-directed) (DN, AG, VL).
Workshop	Step 8. Validation of results with selected interviewees (n = 14) and other invited stakeholders (n = 38) in a 1-day workshop (DN, AG)
Analysis	Step 9. Analysis of additional information and workshop notes (categorisation) (DN, AG, VL) Step 10. Re-evaluation of results (DN, AG, VL)

TABLE 2 Respondent characteristics

Stakeholders	code	F/M*	H/N*
Dentist	Dentist-H1	F	H
	Dentist-N1	F	N
	Dentist-HN1	M	HN
	Dentist-H2	F	H
	Dentist-N2	M	N
Oral hygienist	OralHyg-HN1	F	HN
	OralHyg-N1	F	N
	OralHyg-N2	F	N
Home nurse	Nurse-H1	F	H
	Nurse-H2	F	H
	Nurse-H3	M	H
	Nurse-H4	F	H
Nurse (nursing home)	Nurse-N1	F	N
	Nurse-N2	F	N
	Nurse-N3	F	N
	Nurse-N4	F	N
General practitioner (GP)	Gen-Prac1	F	H
	Gen-Prac2	F	H
	Gen-Prac3	M	H
	Gen-Prac4	F	H
GP assistant	Gen-Prac-Ass1	F	H
Specialist Geriatric Care	Spec-Ger1	M	N
	Spec-Ger2	F	N
	Spec-Ger3	M	N
	Spec-Ger4	F	N
	Spec-Ger5	M	N
	Spec-Ger6	F	N
Home-dwelling patient	Patient-H1	F	H
	Patient-H2	F	H
	Patient-H3	F	H
	Patient-H4	M	H
Nursing home patient	Patient-N1	F	N
	Patient-N2	F	N
	Patient-N3	M	N
Manager	Manager1	M	N
	Manager2	F	N
	Manager3	M	N
Family caregiver	Fam-carer1	M	N
	Fam-carer2	F	H
	Fam-carer3	M	HN
	Fam-carer4	F	H

*F = female; M = Male; H = Home dwelling, N = Nursing home

nursing homes and home dwelling) and informal caregivers in East Netherlands. Respondents were selected through purposive sampling to obtain a 360-degree perspective of current OHC delivery, collaborative and integrated OHC practices, and experienced or envisaged barriers to and facilitators of integrated OHC in extra- and intramural settings. After thematic analysis of the interviews, a one-day workshop (8) was held among respondents and additional purposively selected experts (aiming at proportional representation of different stakeholder groups), in order to validate and generally agree on the outcomes, thus ensuring their representativeness. Trustworthiness was ensured by triangulation of information from interviews, observational notes and expert views; by incorporating the different professional perspectives of the authors in the analysis; through member checking during the interviews; and through validating results during the workshop.

The study was designed by all the authors. AG and DN carried out the interviews and coded text segments. A selection of assigned codes was cross-checked and discussed by all authors. Themes were derived through consultations between all authors. The main methodological steps are summarised in Table 1.

The study was approved by the Medical Ethics Committee (CMO) of the Radboud University, Nijmegen (CMO ref. 2016-3005).

3 | RESULTS

Forty-one respondents from 10 stakeholder groups were interviewed (duration between 25 and 88 minutes) between May 2017 and June 2018. Results were discussed and validated in a workshop of 52 participants in October 2018, as described in Part 1 of this study. The 41 interviewees included 5 dentists, 3 oral hygienists, 8 nurses (4 district nurse, 4 nursing home), 4 general practitioners and 1 GP assistant, 6 specialists geriatric care (physicians), 7 patients (4 home, 3 nursing home), 3 managers, 4 family caregivers); 21 worked for nursing homes patients, 17 for home-dwelling patients, 3 for both; 13 were male, 28 female). The characteristics of the 41 interviewees are summarised in Table 2.

Based on the analysis of interview transcripts and workshop minutes, a list of barriers and facilitators in the functional integration of OHC into primary and nursing-home care practices was created (Table 3). A distinction was made between barriers at macro level (system), meso level (organisation and interprofessional) and micro level (patient-professional interaction/clinical service). Table 4 lists a selection of supporting interview quotes that best illustrate the identified themes. In the text below, the themes are indicated in bold print.

3.1 | Main theme: Compartmentalised care system

The main reason that integration of OHC into general health care is complex and mostly non-existent or poorly implemented, according to most respondents, is the high level of compartmentalisation of the Dutch healthcare system. In the present study, this compartmentalisation was seen at all levels (macro, meso and micro), from healthcare policy level and **healthcare education** to care delivery.

Healthcare policies (so managers, policymakers and care providers agreed) were not supportive of the integration of OHC into other healthcare services. OHC is addressed as a separate unit, if it is addressed at all, in policies both at governmental level and at organisational level (Q1). This **lack of integrative healthcare policies** was reflected in the care approach of care organisations (meso level), where **OHC procedures** were not embedded or were **poorly embedded in care procedures and instruments** in both intra- and extramural care (Q2, Q3). Given reasons were that time and know-how were lacking and, even more importantly, that oral care was generally not viewed as part of basic care by policymakers and managers (this is addressed in Part 1 of this study). OHC procedures were often not available at all or were deficient. Typical examples of such deficiencies were given by patients and oral hygienists and related, for instance, to the difficulty of arranging a dental visit, or transport to a dental practice, in cases where an oral disorder was signalled (Q4). In other words, there was no documented guidance on how to proceed following oral pathology being diagnosed by a caregiver other than an oral health professional.

What further impeded integration was the **poor embedding of OHC in medical guidelines** and related performance measures. Although Dutch nursing homes are required by law to deliver adequate OHC, the existing guidelines for OHC provision, as laid down in the "Verenso guideline"*[1] (9) used in Dutch nursing homes, have a non-obligatory nature. According to interviewees, especially nursing-home managers and OHC professionals, this complicated the integration at management and care-protocol level (Q5);. Yet, despite the non-committal nature and other limitations of the guidelines (*"they create a culture where checking the boxes – doing something – is more important than doing it right" (Nurse-H1)*), in general, the Verenso guideline was seen by most respondents as a helpful source of oral hygiene instructions. It served as a base for quality audits by the inspection board and, as such, created urgency for OHC improvement. At micro level, the lack of guidelines on OHC for home-dwelling frail elders contributed to inconsistency and uncertainties in care provision (Q6). It was stressed, however, that the current Verenso guideline, and guidelines in general, often fail to cover (and hence provide guidance in) many specific and complex situations (Q7).

The **poor embedding of OHC in care instruments** that was mentioned related not only to healthcare guidelines but also to auditing instruments, care plans and diagnostic tools. As prescribed in the Verenso guideline, nursing homes have integrated **OHC in an individual care plan** that is developed upon a client's intake. This includes an OHC plan composed by a dentist. However, in practice, these integrated OHC plans are not always filled in, often not read by physicians, and most often not connected or poorly adjusted to the (compulsory) daily OHC plan that is developed by the nurses in consultation with the dentist or oral hygienist (Q8). A similar procedure exists for the home care situation, although in this case the OHC section of the care plan is filled in by the home nurse (endorsed by the GP). According to home care nurses, even though details of daily OHC were filled in for only about 25-50% of all clients, the mere fact that the care plan included OHC issues helped to draw attention to OHC as part of general care and, if filled in, supported integration of OHC routines in the daily care practices (Q9). Most of the comprehensive geriatric assessment instruments that were used for diagnostic purposes in the home situation contained one or two questions on OHC, such as "have you been to the dentist in the last year?", which was seen as too meagre for raising awareness or for accurate referral. Moreover, these questions were often not filled in (Q10), mostly because of the lack of priority or felt urgency of OHC.

Another barrier to OHC integration at macro level related to **poor financial incentives for collaborative practices and networked care**.

TABLE 3 Barriers (-) and Facilitators (+) to Functional Integration of Oral Health Care (OHC) in General care

Level		
Macro	**Compartmentalised care system** - Compartmentalised healthcare education - Lack of integrative policies - Unequal access to OHC due to insurance status	**Poor interprofessional and communication infrastructure** No national (overarching) information system for patient data
	- Poor financial incentives for collaborative practices and networked care + Round tables of stakeholders	
Meso	- Poor embedding of OHC in care policies, procedures, instruments and medical guidelines - Lack of interprofessional training	- Badly connected ICT systems - Poor interprofessional communication, referral practices, access to practical information
	-Workforce shortage: high staff turnover, low continuity of care +OHC professional in social-medical care teams and in multidisciplinary consultations +Integration of responsibility for embedding, implementation and training in one team +co-location of several basic health services, including oral health	
Micro	- Poor interprofessional competencies and OHC knowledge/ skills among care professionals and patients + Interprofessional sharing best practices & patient preferences + Interprofessional learning on the job, collaborative training + OHC in individual (patient-centred) care plan ± 'OH champion' professional (eg nurse) responsible for (integrating) daily OHC -	

TABLE 4 Quotes supporting identified themes and subthemes related to functional integration

Q1	I think it is due to the general national health policy, oral care has never been part of the overall care policy and of the budget of care institutions. Of course insurers and the government say "yes that was always part of it." But in fact none of them ever thought about it or discussed it. [Manager2]
Q2	What we see a lot is when we [a company that arranges embedding of OHC procedures, and delivers OHC and training] start somewhere is that there is no policy that covers oral care and there are no procedures. So then you help the organization write the policy. And that really goes from vision, strategy, tactical to an operational level. [...] And what you also see is that institutions find it difficult to monitor it properly and add oral care to the audit instrument they already have [Manager1].
Q3	But it [oral care] is just basic care, and the organization itself should actually perform an audit every time where all aspects of personal care would be included, including oral care. Because then, yes, then it becomes much more of a whole. [..] But they don't see it that way [Spec-Ger1]
Q4	And the moment that something really needed to be done [in the mouth], then he [a “mobile” dentist doing oral examinations in a nursing home] said that the lady had to take a taxi to him, because "we only come to just examine." I think that makes no sense. Just looking, okay, but you also have to do something. If you have to put all those people in a taxi to some other location... That is not possible at all. And you know what that costs for those people? They say: “I can't afford a taxi [...] so let's skip it.” [OralHyg-HN1]
Q5	Incidentally, a quality level is not specified in the [Verenso] guideline. [...] When a quality level is specified and a legal framework created, then of course implementing OHC becomes normal, then you can no longer skip it. That way institutions are obliged to include it in their audits and in their quality policy. Now, it is all too non-committal.[Manager1].
Q6	Maybe it would help if the guideline would be included in the system [format] that we use when writing a care plan, so that we can look up “how was that again?” What are the most current guidelines? [Nurse-H4]
Q7	What we need is information on how to act in specific situations. What should I do when someone refuses to open his mouth? What should you do? [...] It fails to provide the information on when and how to deviate from the guideline in a reasoned way. [Nurse-H1].
Q8	The daily oral care plan and the [dentist's] oral care plan do not always agree. You would hope that, but it is not always the case. We thought when we made that guideline, the nurse makes a daily oral care plan after examining the mouth. [...]. Then ideally the dentist would also look at the daily oral care plan, does that agree with his or her oral plans? Ideally, the dentist or dental hygienist would adjust the daily oral care plan again. [...] then one should hope that the caregiver [nurse] and the doctor [GP] will read it that so that it happens. [...] But often it does not happen. [Spec-Ger1]
Q9	It [OHC] is also part of the care plan, indicating like “this should be part of the work process.” It must keep coming back [in the work process], because otherwise oral care will remain something separate, something special. But it should just be like you have to help someone put on an elastic stocking or take care of a wound, the denture must be cleaned. [Nurse-H2]
Q10	[about integration of OHC in geriatric assessments] So we assess the people who have already had an event, such as a heart attack, cerebral infarction, something like that. That ehm, there is a checkbox for “half-yearly dental check-up has been discussed” or something. To be honest, I don't know what my colleagues are doing, but I don't discuss that in general. And I also see from my predecessor that that box is hardly ever checked. [Gen-Prac-Ass1]
Q11	Suppose a client has a problem with nutritional intake. In fact, the care-team should call in an oral care provider and let him or her participate in the MDO [multidisciplinary consultation]. But, who pays the costs of his deployment during the MDO? ...] Participation in a multidisciplinary consultation is by no means refundable. [Spec-Ger5]
Q12	Maybe we should take the step and really make a home visit, if I have the time, but what I already said, that is more or less volunteer work (Dentist-N1)
Q13	Financial compensation for training would help, and may convince the general practitioner that more knowledge on oral health will lead to better care. [Gen-Prac4].
Q14	We are also dealing with [in homes] clients who either do or do not fall under the Longterm Care Act so they either have full coverage or non-coverage of OHC costs [...]. One thing is certain: a healthcare institution will not pay for these costs, because choices have to be made within small budgets. ...] A solution for the proper integration of oral care in general care seems far away. [Spec-Ger1].
Q15	I have a good dentist. He's doing well. But I want to go there every half year, just like everyone else, if there is nothing special, not every three months. [...] That's because of the money (Patient-N2).
Q16	Cleaning remains a very difficult task, especially on the psychogeriatric ward. Sometimes it really doesn't work. And yes, together we can learn from each other, I think. So here we weekly discuss this among the caregivers and oral hygienists, but maybe they don't manage to do that at in other places [Spec-Ger4]
Q17	We had internships where we [oral hygienists] taught them [nurses] how to provide oral care and they taught us how to get people out of the wheelchair, how to transport them to a chair, really those little things, that I think, I have no idea, how do I get those legs up, or how does that work? And that exchange that we used to have has not continued and that is a shame, because it is so simple and they want so much interdisciplinary [collaboration]. [Oral-HygN1]
Q18	Interdisciplinary or interprofessional learning is unfortunately not an assessment criterion of the Dutch dental education accreditation committee (Manager2)

(Continues)

TABLE 4 (Continued)

Q19	But if no one of the care-staff knows about what a healthy mouth looks like, then how can they decide whether or not what they see is healthy? That there is a frame that you can take out or a prosthesis. Those prostheses are often completely stuck and when you start to pull them out of someone suffering from dementia… and then you want to put that thing back… it is not surprising that they do not open their mouths anymore. And then nurses think like, "oh could I take that thing out? Never seen that." So that denture has been stuck in the mouth for three months and has not been removed. [Oral-HygNH1]
Q20	We have to complement each other in the team. There are people who pick up more things than others. And sometimes you see that someone is unable to pick it [oral health care] up. Certain oral health problems. There are certainly differences, it also has to do with people's education, the staff have very diverse backgrounds. People with a clinical background work differently than people with a home nurse background. [Nurse-H1]
Q21	We have previously talked with all the doctors in this region about mouths and teeth, dental things. With all dentists here from the region. So .. Dentists sat in groups and then all the doctors started to move from group to group. And then in fifteen minutes they had to tell something about their subject. Because we actually don't know enough about it. […] we also asked why the gums are receding. Those kind of things. [..] Or it was about what kind of hassle you could get from infected teeth. […] a whole new world opened up to us […]. So there really is a knowledge gap. [Gen-Prac1]
Q22	So our next step is: How can we improve competencies and influence behaviour? We now have made a kind of PowerPoint presentation with 7 themes. And each theme has one or two sheets, which […] the oral care coordinator can use. She can say, "Well, I want to talk about how the emergency procedure works" And then it's five minutes of training. So you can ask attention for your theme at every little moment. […]. [Nurse-N2]
Q23	We have those companion-sessions […]., then you should talk about oral health […] But not with the idea that you as a family caregiver have to take over the oral care from the nursing home, but that you can help signal oral health issues. And signal if it [oral health care] is done and if it is done right. You could also turn it around. Family care-givers could help express the patient's wishes to the nurses. Because they [patients] may not say that to healthcare. There must be someone in between, otherwise it won't work. [Fam-Carer1]
Q24	I was talking with a home nurse about their files. I can't get into them. They are all separate systems. Also separate from the doctors'. And the type of system again depends on the care organization; they purchase and manage those systems. [..] I can't get into the doctor's system either. And the doctor cannot enter my system. […] [Spec-Ger2].
Q25	So there are some large [electronic health recording] systems and none of them are interconnected. And our system is not connected to that of the nursing home where we provide care. So it's all duplicate work, […] in this and that system. Then it goes into their system but then I think very few doctors see it. [Dentist-N2]
Q26	[…] all that information needs to be exchanged by care-mail [secured mail], […] that is quite inconvenient. [Gen-Prac-Ass1].
Q27	I don't always find out what kind of medication people use, but if that's not the case, I ask to take a list from their pharmacy. […] And if they really do not know it, but they do know their pharmacy's name, then we call, but not every pharmacy provides information. That is not exactly easy [Dentists-H1]
Q28	[…] It just goes wrong there. The communication. Doctors do not read an oral care plan. Oral care plans are not embedded.[…]. You sent something, requiring action, and that needs to be picked up and acted upon but then no-one does anything [Dentist-N2]
Q29	From the moment when you signal that mouth rinsing is getting difficult, then we should actually ask for advice. How do you ensure that food particles disappear from the mouth? […] And then it would of course be very useful if you also know where you can easily get that information. [Nurse-H1].
Q30	There is so much, I can't find it in my mailbox or elsewhere anymore […] don't know what is what, and what it is worth [Nurse-N2].
Q31	There is of course also an area that is a bit in-between a dentist and dental surgeon. For example, spots in the mouth, I sometimes find that difficult. […]. I had someone with a giant ulcer last year. Then I thought, could this really be a normal ulcer, isn't it just something else? That really had to be checked. And then it really is a hassle, whom should I refer to then? [Gen-Prac1]
Q32	You have to find everything out yourself […] we don't refer much, If I'm honest, I often put it back to the family caregivers, I think that is their responsibility. [Nurse-H2]
Q33	I think there's quite a bit there [oral disorders], but that we just don't know a lot. And what you do not know, you cannot recognize and do not signal, and you do not ask about. [Gen-Prac4]
Q34	How we do it normally, of course we have multidisciplinary consultations, in which we discuss the basics. Also with family, that is also part of it. […]. And we always make a care plan and a treatment plan. And yes, you should also add the dentist to it [these consultations]. [Spec-Ger4]
Q35	One of the ways to have multidisciplinary consultations with GPs are MDOs where indeed a home nurse is sitting at the table, or even better the entire social district team. […]. So I have already seen several patients being discussed, but oral care is often something that is not discussed […] Perhaps a dentist should join them every so often [Spec-Ger2].
Q36	That is why "oral health champions" have been asked to make oral health easier to discuss within the department and to be on top of everything. That way at least one person is responsible, also for the equipment and things that must be present on the ward, and for delivery of the right oral care, and for the contacts with the families, such as when toothbrushes need to be replaced. [Nurse-N4]

(Continues)

TABLE 4 (Continued)

Q37	..the whole problem of oral care for older adults is that it is not so much about dentistry, but rather an organizational problem. [...]. Then we created the 3-pillar model. [...] it is not only important to have a treatment team on site. [...] yet that team is so important. A dentist from the curative angle, a dental hygienist from the preventive angle. And the assistant actually more as stable organizer.[....]. So in addition to that team you also need to provide training for healthcare staff, because when the healthcare staff does not know what they are doing [...] they don't know when to call for the dental professionals [...]. And the third pillar has to do with process and procedures, which is actually about creating the infrastructure for the implementation of the [Verenso] guideline. [...] We see that many institutions know about it, but do not use it properly because they do not know how to do that [Manager1]
Q38	And my experience is sometimes that they [mobile dental team] say that well those nurse coordinators do not have to do oral screenings, because we do that. And yes, then I do try to motivate those nurse coordinators and then I say yes, but they [mobile dental team] come once every six months, and in the meantime you have to do it. So you have to keep looking in the mouths. So then it is actually, when you have such an external party, you just have to redefine the roles. [Nurse-N1]
Q39	The work shortage is huge. The quality of personnel is shocking. I was really startled by the level. [Manager3]
Q40	If you say something to someone [about agreements that have not been met] than she says "Yes but I am here for the first time, I am a seasonal worker" or "yes but the one who did that stopped working." That doesn't work. Then you write it down in the patient's record, hoping that someone will ever read it [Oral-HygN2].

Current financial incentives in the system trigger dentists to focus on generating revenue rather than providing collaborative care, while fees for cooperating or integrative practices, for example inclusion of dental professionals in care networks, were reported by respondents to be poor or non-existent in intra- and extramural care. For example, participation of dental professionals in multidisciplinary consultations (Q11), or finetuning oral and general care in care plans, was not reimbursed for many patients (depending on the insurance scheme), while home visits to homebound patients were – according to some but not all dentists – inadequately paid (Q12). Besides the government funding of networked care practices, the financing of the training needed for adequate networked care delivery, such as training on basic oral health screening for GPs, was deemed beneficial, yet non-existent (Q13). A related barrier at macro level was the **unequal access to OHC due to insurance status.** This made it difficult to effectively organise care at meso level, for example within a nursing home, where patients had different entitlements to OHC depending on their care-indication (eg rehabilitation or full long-term care) and related insurance scheme (Q14). At micro level, this sometimes resulted in certain patients refusing oral treatment recommended by OH professionals because of the costs they would incur (Q15).

The importance of **round tables of stakeholders**, another facilitator, was agreed upon during the workshop and was further demonstrated through the planning and recent implementation of a series of national meetings of different health actors, including policymakers, nursing-home managers, dentists, oral hygienists, geriatric doctors and researchers, that put political reforms supporting OHC integration into care and OHC improvement on the agenda.

The benefits of **interprofessional training**, both in formal education and on the job, were acknowledged by non-OHC care providers and OH professionals alike. Special practical knowledge about this target group (eg how do I get this person in and out of his wheelchair) was thought to be essential for adequate oral care provision (Q16). Yet, it was not taught in any OHC training that our respondents knew of, nor were collaborative learning practices a fixed part of the care routines (Q17). Likewise, at meso level, in the formal education programme of oral hygienists and dentists, interprofessional collaborative practice and interprofessional education that involve subjects other than oral care disciplines have no place. They are also not addressed at macro level in the formal standards of the national dental education accreditation committee, which was seen as unfortunate (Q18).

Given the lack of interprofessional learning practices, it was no surprise to hear about **poor interprofessional competencies** of OHC providers. These competencies, for example regarding treatment of older adults with complex care needs, were not always up to standard, while **oral care provision skills and elementary knowledge of oral health among general care professionals** who provided daily care were equally poor or lacking (Q19). On the other hand, this could often be adequately compensated for through working in multidisciplinary teams (Q20).

Several other small-scale best practices for training interprofessional competencies were mentioned. One GP spoke about short "pitch" sessions, in a speed-date format, where dentists informed GPs about oral health issues. The GPs, in turn, shared this knowledge in training sessions for home nurses (Q21). Another example was sharing oral health knowledge in ultra-short training sessions in nursing homes (Q22). At micro level, **sharing best practices and patient preferences** between patients, family caregivers, nurses and oral health professionals helped considerably in accomplishing patient-centred care. However, it was important to choose the right time and place for this, in line with the prioritisation of the patient's care needs (Q23).

3.2 | Main theme: Poor interprofessional and communication infrastructure

The infrastructure for communication (in-person and digital/on paper) and related collaboration were generally seen as unsupportive of OHC integration. Mainly for reasons rooted in privacy, there is **no national central information system** for storage and exchange of patient data. Patient health-recording systems are developed at organisation level. As a result, caregivers, according to both dentists and non-OH professionals (nurses, doctors), were hampered in

their collaboration with dental personnel by **badly connected ICT systems** of collaborating care providers of different organisations. Dental professionals generally had no access to patient records and to medication lists. Likewise, nurses, GPs and geriatric doctors could not access dental records or oral care plans (Q24). Hence, the same information often had to be recorded in different medical systems, which was conceived as a very time-consuming and demotivating task (Q25). Another time-wasting effect of badly connected information systems was that patient information required for delivering good care often needed to be obtained through emailing or phoning the right person (Q26, Q27).

Even when access was possible, participants expressed complaints about **poor interprofessional communication** that was rooted in lack of time or motivation to read all available information. So much had to be recorded that it was almost impossible to keep up with the constant flow of patient information. As a result, recorded requests for care-actions were not read and followed up on, and caregivers engaged in "meta"-communication ("*please look at that piece of info I recorded in your system*") (Q28).

Moreover, **access to relevant practical information** on how to act was poor, partly because sources of information were unknown, especially to nurses and GPs (Q29). In a few nursing homes that had an active OHC coordinator, on the other hand, there was a plethora of materials and information on OHC; yet, the coordinator could not determine their relevance and quality (Q30).

Limited access to information, in particular information or protocolisation about which OHC professional to refer to in which case, was also given as a reason for **poor referral practices** (Q31). Poor (or no) referral between caregivers and oral health professionals was most apparent in the home situation and was also related to assumed responsibilities and care compartmentalisation. Home nurses, for instance, generally agreed that it was the client's or their family caregiver's responsibility to initiate dental visits (Q32). Referrals to and by dental professionals often depended on the availability of personal contacts. In contrast to geriatric doctors, GPs indicated that they hardly ever referred to a dentist, partly because they did not see many oral disorders in their patients – yet they admitted that they could only recognise elementary disorders (Q33) and only rarely carried out oral examinations or asked the patient about oral health issues. If they did refer, it was mostly to a dental surgeon, in case of maxillofacial complaints.

Several facilitators of OHC integration through improvement of collaboration and communication at meso- and micro level were mentioned. Having **an oral health professional in multidisciplinary consultations** (Q34) **or in social-medical district teams** (Q35) was thought of as helpful. Such teams typically included a GP, care coordinator, patient and family caregiver, geriatric doctor, home nurse, social worker and any medical professional whose expertise was deemed relevant for the patient (eg physiotherapist, psychologist).

Appointment of an "**oral health champion**," a nurse who is responsible for stimulating and supporting adequate implementation of daily OHC, was seen as helpful by most, but not all, respondents. They generated awareness and helped to increase OHC skills and knowledge levels among colleagues by organising trainings, signalling barriers, and facilitating adequate OHC implementation (Q36).

Some nursing homes contracted professionals for **task integration**: embedding, implementation, and training of OHC procedures and organising daily OHC (Q37). The vision behind this approach was that poor OHC implementation is mostly an organisational problem. Other infrastructural facilitators mentioned for mitigating effects of care compartmentalisation and for improving collaboration were **co-location of basic health services and oral health services.** Following the Verenso guidelines, nursing homes either had contracted oral professionals on-site, in an equipped dental room, or had drawn up contracts with mobile oral care providers. While generally seen as beneficial, this also led to some confusion about responsibilities, for example between oral hygienists and nurses (Q38). Co-location of these services in medical centres, which serve home-dwelling people, was also seen as beneficial, but none of our respondents had experience in such a setup.

Finally, the **workforce shortage** of qualified nurses was a main barrier identified by literally all stakeholders that resulted in inadequate quantity and quality of delivered care throughout the country. This was also a major barrier to the integrative potential and practices at the meso- and micro level (Q39). The workforce shortage, partly through **high staff-turnover rates**, undermined effective implementation of arrangements between caregivers at meso level, and hence resulted in **discontinuity of care practices** (Q40) and lack of time available for training and communication. At micro level, it is explained in part the poor OHC knowledge and skills in care personnel.

4 | DISCUSSION

The present study explored functional barriers and facilitators that impact the integration of OHC in general care in East Netherlands. Identified barriers were manifest at macro-, meso- and micro level and led, in combination with normative barriers, to sub-optimal OHC provision being mostly non-integrated into general healthcare practices. Overarching barriers were (a) a compartmentalised care system and (b) poor interprofessional and communication infrastructure.

Regarding the theme "compartmentalised care system," in The Netherlands and worldwide, (general) medical and OHC are organised as two separate, siloed systems.[10,11] Medical and OHC providers come from different cultures and educational backgrounds and work in financially different systems. Our participants mentioned that the base for successful integration, being clear integrative policies at macro level, is non-existent. At meso- and micro levels, some respondents mentioned that in their nursing home the lack of (national) guidance was tackled by contracting expertise to facilitate, organise (meso) and realise (micro) sound implementation of interprofessional collaborative practices. While this seemed to be a viable solution at a pioneering stage, for reasons of cost and continuity ideally such expertise in integrating OHC would be cultivated within organisations.

Apart from poor embedding of OHC in care policies and procedures, OHC was equally poorly embedded in medical guidelines and instruments such as health assessments, a barrier acknowledged by medical and dental experts alike.[12-15] A limited number of OH questions, mostly two or three, are included in a few health assessments such as COPD and Diabetes assessment instruments. These questions, however, as reported by our nurses and GP assistant, are often not asked owing to time constraints and low prioritisation.

In The Netherlands, apart from the Verenso guideline on provision of OHC to nursing-home residents,[9] which prescribes inclusion of an OHC section within the general care plan, (practical) guidelines on integrated care practices that involve OHC are non-existent. The Dutch KIMO (knowledge institute for OHC) is currently developing guidelines on polypharmacy and on OHC for home-dwelling frail elders. These guidelines are interprofessional to some extent.[16] Such guidelines serve as a practical set of instructions and, as indicated by one of our respondents and in literature, they do help to establish norms, raise awareness and guide OHC practices among nurses.[17,18] They might also help in reaching agreement on what good OHC entails among all care providers involved in OHC.

Poor financial incentives for collaborative practices and networked care was another frequently reported barrier, reflecting the lack of vision and national policy in this area. Several researchers, in The Netherlands and worldwide, have addressed the need for reform of payment models in order to support OHC integration into health care.[3,12,13,19] A deviation from the commonly used "fee-for-service" models is desired, since this mechanism does not adequately support interprofessional preventive care (eg instruction of nurses or family caregivers by OH professionals), the control of common risk factors, or the promotion of interprofessional communication. A model that combines fee-for-service, fee-for-performance and capitation elements and that is based on the health- and oral health risk profile of the patient, will probably better support integration of OHC in general care practices.[19] However, since risk profiles change throughout the course of life, OHC remuneration based on this model may require high administrative input.

An associated barrier was the separation of the medical and dental insurance realms; this is also extensively reported in literature.[10,20,21] This situation is further complicated by separations between (older) adults who are insured under different regulations within the same care system (as in The Netherlands).[22]

Education plays a key role in OHC integration. Poor knowledge, skills and awareness in care professionals and patients about (impacts of) OH were seen as major barriers to OHC integration by a majority of respondents and have been reported in many studies and reviews (eg. [23,24]). Although there are limits to the potential of training on its own to change the behaviour and attitude of care providers,[25,26] training in connection with facilitation of interprofessional collaborative care practices and restructuring care processes, together with moving norms with regard to OH importance, will certainly increase the effectiveness of interprofessional practices. It may be helpful to change the compartmentalised healthcare education system, where dentistry, medicine and sometimes nursing studies are completely separate disciplines, by including (more) interprofessional joint courses and collaborative practical training.[3,27,28] Interprofessional education helps transcend siloed approaches to health care, promote behaviour change and improve communication,[33-35] and, in the case of OHC, has shown slight positive effects on OH knowledge levels, attitude towards OH provision, and interprofessional collaboration competencies.[29-31] The European Interprofessional Practice and Education Network (EIPEN) has described five core competencies related to interprofessional practice: efficient interprofessional collaboration and referral, good interprofessional communication, interprofessional development of patient care plans, evaluation of efficiency of interprofessional collaborative practices, and interprofessional problem management.[32] These are, however, at best partly covered in the Dutch dental curricula, and only with regard to the collaboration between dentists and oral hygienists, which is more "intra" than "inter"-professional in nature.

Another way of increasing OH knowledge and awareness is through so-called "citizen empowerment" processes.[36] One recent Dutch empowerment initiative, De Mond Niet Vergeten (DMNV – Don't forget the Mouth),[37] targets groups of stakeholders through increasing their OH literacy and awareness; facilitating OH screening, assessment and easy referral by non-OHC providers; and helping to establish networks and promote collaborative OHC practice.[37] However, its continuity is dependent on financing of individual sponsors, and outcomes are not yet systematically evaluated, a weakness that is typical of many similar programmes and initiatives.[38]

Regarding the barrier "poor interprofessional and communication infrastructure," care providers complained that there were a multitude of electronic health-recording systems at system (macro) level that were not interconnected and that at national level there was no legislation to guarantee access to relevant patient information for all registered care providers. A national covenant facilitates the electronic exchange of medical data via a so-called "National Switch Point" (Landelijk Schakel Punt).[39] However, not all healthcare organisations and virtually no dentists are connected to this system.

Where no interconnected and interoperable electronic medical record systems are in place to create networks and facilitate quick exchange of information, individual providers or organisations have to do more work, which is inefficient and time-consuming[10] and hence complicates integration of OHC. This has been reported in several reports and reviews as a crucial barrier to OHC integration.[3,20,21] Such systems could also be used for prompting, guiding and informing care providers.[10] However, if care providers, like many respondents in our study, have little time and are overloaded with requests for sharing and recording information, or are insufficiently trained in effective use of both the system and OH information, or have a team culture or norms or a personal attitude that is not supportive of OHC integration [Part 1], no digital or other communication infrastructures can effectively support OHC integration.

Apart from the digital infrastructure, it is also clear that improved provider-to-provider and provider-to-patient communication, collaboration, referral systems and navigation are needed for adequate OHC integration.[3,5,6,12,40] Better provider-to-patient communication and patient navigation may also help to empower the patients,[24]

who in our study showed little or no awareness of potential benefits of OHC integration. Empowerment of patients, helping them to express their wishes, is one proven positive effect of preventive integrative care interventions for community-dwelling frail older people, as shown in a systematic review by Looman e.a.[38]

In our study, respondents have mainly reported barriers in the meso- and the underlying micro domain, which reflects the majority of studies on OH integrative care practices that have recently been reviewed.[11] However, even if a care system is well designed at system (macro) level and connected to supporting protocols, tools and roles (macro-meso), if there is no prioritisation and leadership from the management (meso), and if care providers lack skills, knowledge, awareness, a sense of urgency or personal motivation for OHC delivery (micro), as indicated in Part 1 of this study, OHC will not improve and patients will not benefit.

Some of this study's strengths and limitations have been discussed in Part 1 of this study. These mostly concerned coverage of relevant views and selection of participants through purposive sampling techniques, which were deemed adequate and achieved through combining individual interviews with a stakeholder workshop. However, the included views cannot be considered as exhaustive; for example we did not manage to find patients with a good understanding of what OHC integration could mean or entail.

Although we conducted the interviews in one geographical region (East Netherlands), reactions to workshops and presentations implemented as part of the Interreg "Zorg Verbindt" project confirmed that the barriers found were identical at system level and mostly similar at meso- and micro level throughout the Netherlands. Facilitators at meso- and micro level showed minor, but no systematic, regional variation and best practices were often institution-related.

In the absence of shared norms and a vision at macro level that could serve as a base for developing an appropriate infrastructure, tools and rules for OHC integration (top-down process), the way forward is to experiment with small-scale initiatives and best practices at local level. Several examples of such initiatives were mentioned in our study, for instance: implementation of and training in OHC integration led by one team, and OHC training on the job for nurses by oral hygienists. Such small-scale initiatives (meso-micro) are crucial for raising awareness, increasing knowledge and adding to the evidence base, in accordance with which shared norms and visons could be developed at macro level (bottom-up process).

One last consideration is that not many stakeholders appeared to have knowledge that included care mechanisms at macro-, meso- and micro level, as well as factors and dynamics that determine the relations between these levels. Changes in care systems and processes should start from such knowledge, to which this study contributes.

5 | CONCLUSION

In The Netherlands, OHC for older people is at best poorly integrated into general care practices. Barriers and facilitators that affect this integration are interconnected across macro-, meso- and micro levels and between normative and functional domains and are mainly related to compartmentalisation at all levels and to poor interprofessional and communication infrastructure.

ACKNOWLEDGEMENTS

This research was part of the "Zorg Verbindt" project (project nr 203072), which is financially supported by EUREGIO-Rijn Waal (a consortium of INTERREG A Deutschland-Nederland, Province Nordrhein-Westfalen, Province Gelderland and Province Limburg). The funders had no role in the study design, data collection and analysis, or preparation of the manuscript. The research team acknowledges all participants in the study.

CONFLICT OF INTEREST

The authors have no conflicts of interest to declare.

AUTHORS' CONTRIBUTIONS

The first author (DN), designed the study, conducted and analysed the interviews, lead the workshop and wrote the manuscript. The second author (AG) designed the study, conducted and analysed the interviews, co-presented the workshop and contributed to the manuscript. The third author (VL) co-designed the study, participated in analysis of the interviews' transcripts, participated in the workshop and contributed to the manuscript.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available upon reasonable request from the corresponding author (DN).

ORCID

D. Niesten https://orcid.org/0000-0001-9463-0051

REFERENCES

1. Watt RG. Emerging theories into the social determinants of health: implications for oral health promotion. *Community Dent Oral Epidemiol*. 2002;30(4):241-247.
2. Sheiham A, Watt RG. The common risk factor approach: a rational basis for promoting oral health. *Community Dent Oral Epidemiol*. 2000;28:399-406.
3. Atchison KA, Weintraub JA. Integrating oral health and primary care in the changing health care landscape. *N C Med J*. 2017;78(6):406-409.
4. Niesten D. *Oral health care and oral health-related quality of life of frail and care-dependent older people*. PhD Thesis Nijmegen: Radboud University Nijmegen; 2017. https://repository.ubn.ru.nl/bitstream/handle/2066/173256/173256.pdf?sequence=1
5. Hummel J, Philips KE, Holt B, Hayes C. *Oral Health: An Essential Component of Primary Care*. Seattle, WA: Qualis Health; 2015. http://www.safetynetmedicalhome.org/sites/default/files/White-Paper-Oral-Health-Primary-Care.pdf?utm_source=June+2015&utm_campaign=June+2015&utm_medium=archive
6. World Health Organization WHO. *People-centred and integrated health services: an overview of the evidence*. Geneva: World Health Organization; 2015. Contract No.: WHO/HIS/SDS/2015.7. https://apps.who.int/iris/bitstream/handle/10665/155004/WHO_HIS_SDS_2015.7_eng.pdf;jsessionid=FB10576120600E0FA2E9973E5B83A7D0?sequence=1

7. Valentijn PP, Schepman SM, Opheij W, Bruijnzeels MA. Understanding integrated care: a comprehensive conceptual framework based on the integrative functions of primary care. *Int J Integr Care*. 2013;13:e010.
8. Jungk R, Müllert N. *Future workshops: how to create desirable futures*. London: Institute for Social Inventions; 1987.
9. VERENSO. Richtlijn mondzorg voor zorghafhankelijke cliënten in verpleeghuizen. 2007. https://www.verenso.nl/richtlijnen-en-praktijkvoering/richtlijnendatabase/mondzorg. Accessed March 14, 2020
10. Atchison KA, Rozier RG, Weintraub JA. Integration of Oral Health and Primary Care: Communication, Coordination and Referral. *NAM Perspectives*. 2018;8(10). http://dx.doi.org/10.31478/201810e
11. Harnagea H, Lamothe L, Couturier Y, et al. From theoretical concepts to policies and applied programmes: the landscape of integration of oral health in primary care. *BMC Oral Health*. 2018;18(1):23.
12. Jerkovic K, Everaars B, van der Putten GJ. Priorities and recommendations in oral health care for older people. *Ned Tijdschr Tandheelkd*. 2017;124(10):503-509.
13. Vanobbergen J, Hollaar V, Sederel R, Vyt A. Interprofessional collaboration, the key to better oral healthcare for frail older people. *Ned Tijdschr Tandheelkd*. 2019;126(12):679-686.
14. Harnagea H, Lamothe L, Couturier Y, Emami E. How primary health care teams perceive the integration of oral health care into their practice: a qualitative study. *PLoS One*. 2018;13(10):e0205465.
15. Hummel J, Phillips KE. A Population health management approach to oral health. *J Calif Dent Assoc*. 2016;44(3):167-172.
16. Kennisinstituut Mondzorg (KIMO). KIMO Programma 2017–2020 2020. https://www.hetkimo.nl/programma-2017-2020/. Accessed March 23, 2020
17. De Visschere LM, van der Putten GJ, Vanobbergen JN, Schols JM, de Baat C, & Dutch Association of Nursing Home P. An oral health care guideline for institutionalised older people. *Gerodontology*. 2011;28(4):307-310.
18. Patterson Norrie T, Villarosa AR, Kong AC, et al. Oral health in residential aged care: perceptions of nurses and management staff. *Nurs Open*. 2020;7(2):536-546.
19. Pitts N, Mazevet M, Boulding H. *Towards paying for health in dentistry*. London: The Policy Institute at King's; 2019. https://kclpure.kcl.ac.uk/portal/en/publications/towards-paying-for-health-in-dentistry(01711f4e-5a70-4762-b72e-2c2af41ce589).html
20. Harnagea H, Couturier Y, Shrivastava R, et al. Barriers and facilitators in the integration of oral health into primary care: a scoping review. *BMJ Open*. 2017;7(9):e016078.
21. Norwood CW, Maxey HL, Randolph C, Gano L, Kochhar K. Administrative challenges to the integration of oral health with primary care: A SWOT analysis of health care executives at federally qualified health centers. *J Ambul Care Manage*. 2017;40(3):204-213.
22. Tomar SL, Cohen LK. Attributes of an ideal oral health care system. *J Pub Health Dent*. 2010;70(Suppl 1):S6-S14.
23. Gostemeyer G, Baker SR, Schwendicke F. Barriers and facilitators for provision of oral health care in dependent older people: a systematic review. *Clin Oral Investig*. 2019;23(3):979-993.
24. Kossioni AE, Hajto-Bryk J, Maggi S, et al. An expert opinion from the European college of gerodontology and the European geriatric medicine society: European policy recommendations on oral health in older adults. *J Am Geriatr Soc*. 2018;66(3):609-613.
25. Weening-Verbree L, Huisman-de Waal G, van Dusseldorp L, van Achterberg T, Schoonhoven L. Oral health care in older people in long term care facilities: a systematic review of implementation strategies. *Int J Nurs Stud*. 2013;50(4):569-582.
26. de Lugt-Lustig KH, Vanobbergen JN, van der Putten GJ, De Visschere LM, Schols JM, de Baat C. Effect of oral healthcare education on knowledge, attitude and skills of care home nurses: a systematic literature review. *Community Dent Oral Epidemiol*. 2014;42(1):88-96.
27. Mertz EA. The dental-medical divide. *Health Aff (Project Hope)*. 2016;35(12):2168-2175.
28. Subramanian G. Bridging the divide between dental and medical care. *Health affairs (Project Hope)*. 2016;35(12):2337-2339.
29. Farokhi MR, Muck A, Lozano-Pineda J, Boone SL, Worabo H. Using interprofessional education to promote oral health literacy in a faculty-student collaborative practice. *J Dent Edu*. 2018;82(10):1091-1097.
30. Hallas D, Fernandez JB, Herman NG, Moursi A. Identification of pediatric oral health core competencies through interprofessional education and practice. *Nurs Res Pract*. 2015;2015:1-7.
31. Nash WA, Hall LA, Lee Ridner S, et al. Evaluation of an interprofessional education program for advanced practice nursing and dental students: The oral-systemic health connection. *Nurs Edu Today*. 2018;66:25-32.
32. Vyt A. *Charter by The European Interprofessional Practice and Education Network based on the 3rd European conference. In: Vyt A. Interprofessioneel en interdisciplinair samenwerken in zorg en welzijn*. Antwerpen: Garant; 2017.
33. Frenk J, Chen L, Bhutta ZA, et al. Health professionals for a new century: transforming education to strengthen health systems in an interdependent world. *Lancet (London, England)*. 2010;376(9756):1923-1958.
34. Hammick M, Barr H, Freeth D, Koppel I, Reeves S. Systematic reviews of evaluations of interprofessional education: results and work in progress. *J Interprof Care*. 2002;16(1):80-84.
35. Simon L. Overcoming historical separation between oral and general health care: interprofessional collaboration for promoting health Equity. *AMA J Ethics*. 2016;18(9):941-949.
36. World Health Organization WHO. *A vision for primary health care in the 21st century. Towards universal health coverage and the sustainable development goals*. Geneva: World Health Organization; 2018. https://www.who.int/docs/default-source/primary-health/vision.pdf
37. De Mond Niet Vergeten! https://demondnietvergeten.nl/. Accessed March 23, 2020.
38. Looman WM, Huijsman R, Fabbricotti IN. The (cost-)effectiveness of preventive, integrated care for community-dwelling frail older people: a systematic review. *Health Soc Care Community*. 2019;27(1):1-30.
39. Zorgcommunicatie VVZv. LSP Landelijk Schakelpunt 2020. https://www.vzvz.nl/over-het-lsp/hoe-werkt-het-landelijk-schakelpunt. Accessed February 15, 2020
40. Briggs AM, Valentijn PP, Thiyagarajan JA, Araujo de Carvalho I. Elements of integrated care approaches for older people: a review of reviews. *BMJ Open*. 2018;8(4):e021194.
41. Valentijn PP, Biermann C, Bruijnzeels MA. Value-based integrated (renal) care: setting a development agenda for research and implementation strategies. *BMC Health Serv Res*. 2016;16:330.

How to cite this article: Niesten D, Gerritsen AE, Leve V. Barriers and Facilitators to integrate Oral Health care for Older Adults in General (Basic) Care in East Netherlands. Part 2 Functional Integration. *Gerodontology*. 2021;38:289–299. https://doi.org/10.1111/ger.12525