CHAPTER 9
General discussion
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GENERAL DISCUSSION

With the EU ADVOCATE research project, approaches were explored to optimise the delivery of oral healthcare in Europe and encourage a transition towards more evidence-based, prevention-oriented and patient-centred oral healthcare. This thesis evaluated the Field Studies approach, which builds on the intrinsic motivation of general dental practitioners (GDPs) to promote change of clinical practice through academic detailing (AD) and the provision of regular structured feedback on the type and range of care GDPs deliver to patients. This approach aims to increase awareness, advance reflection and increase discussion in groups of GDPs on the variation of care delivered in the dental practice and to stimulate debate on quality of care and best practice in terms of prevention, shared decision making and the underlying evidence.

The main aim of this thesis was to evaluate whether the approach - AD reinforced with information on delivered care - is feasible, acceptable and useful to implement in general dental practices. Findings, reported in chapter 7 and 8, show that groups of GDPs from different European countries consider the approach feasible and replicable, although some barriers to adoption were identified in terms of recruitment and data collection procedures. The GDPs provided several suggestions to overcome technical, logistical and motivational difficulties to improve implementation of the approach in the future. Even though the recruitment of Stewards and GDPs was in some instances challenging, all participating countries within the ADVOCATE project succeeded in establishing an Academic Detailing Group (ADG).

GDPs perceived the ADG meetings as a useful approach for optimising their care delivery and saw potential for the approach to contribute to a better oral health and oral healthcare. Feedback information mainly consisted of patient-derived data on the care delivered. GDPs perceived this feedback information as a useful source of information, providing insight into patient perspectives and patient satisfaction and allowing comparison of delivered care to peers. Discussions with peers and reflection on the feedback information helped some GDPs with identifying possible action points for improving their care delivery. However, some GDPs reported that the ADG-meetings and feedback information did not stimulate them to define action points for improvement or they felt no need to make changes to their care delivery. Eventually it turned out that some GDPs were not aware that setting-up action points was a goal of the ADG meetings.
Of those GDPs who said to have made changes to their dental practice performance, most had identified action points related to the improvement of communication between care providers and patients. Feedback information and group discussions allowed for the identification of a mismatch between patients and their GDPs in knowledge and perception about oral healthcare and the delivered care. For example, most GDPs were certain that they always asked the patient for medical updates and that they always checked for gum disease, while data indicated that a large proportion of patients were unaware of this. GDPs realised during the Field Studies that care providers and patients express and understand information differently. Such asymmetry in knowledge between care-provider and patient has been identified earlier. According to Arborelius and Timpka it is important for care providers to be aware of different orientations so that he or she can modify their approach to obtain all relevant information from the patient. Clear communication and greater involvement of the patient in the care process is required to overcome such asymmetry in knowledge. Furthermore, communication between practitioner and patients has been shown to impact a patients’ knowledge, motivation, decision-making, engagement and empowerment, and even health. With increased availability of information and the call for shared-decision making, it has become even more important to reduce knowledge asymmetry through providing patient-centred care and improving communication. GDPs participating in the Field Studies recognised the need for well-established communication skills amongst care providers. The general assumption was that the effectiveness of care might be increased by overcoming knowledge asymmetry and comprehensive professional communication competences.

Hence, from chapter 7 and 8 can be concluded that the Field Studies approach provides a potentially feasible, acceptable and useful strategy to stimulate patient-centred oral healthcare. Implementation of the approach to improve care delivery seems effective in stimulating GDPs to reflect and evaluate their care delivery. However, at this point, the results provide insufficient information on whether the approach also stimulates more prevention and evidence-based oral healthcare. Future research seems necessary to identify whether the Field Studies approach can be used to stimulate prevention and evidence-based care and in particular its effect on the patients’ health.

Another objective of this thesis was to develop a comprehensive list of measures for oral healthcare which are considered important, relevant and useful by stakeholders in dentistry to provide feedback on the type and range of delivered oral care. In
the last decades, several attempts have been made towards the development of measurement in oral healthcare, however only few measures include the various aspects of oral healthcare, including patient safety, patient satisfaction, behaviour or affordability of care. Chapter 3 of this thesis demonstrated the establishment of a comprehensive and multiple stakeholder consented list of measures designed for guiding the implementation of transparent and explicit measurement of routine data of oral healthcare within and among systems. These measures formed the basis for obtaining data that could be used as feedback information for GDPs. Various aspects of care were found to be relevant for feedback information, including processes of care (restorative and preventive treatments), outcomes of care (oral health outcomes) and patient satisfaction, behaviours and preferences. These were included in the list of ADVOCATE oral healthcare measures that was established. Patient-derived data from an online questionnaire application were found to be an appropriate data source for the majority of measures, while insurance claims data sources were to a lesser extent. Even though various logistic barriers were identified regarding the collection of patient-derived data in the dental practice during the Field Studies, GDPs perceived the data to provide useful information which stimulates discussion on quality improvement of care delivery. GDPs considered the patient-derived data to be interesting and important, especially regarding the provision of patient-centred care. GDPs perceived claims data as a less relevant source for feedback data and stimulating discussion, because claims data were limited to administrative health insurance data on a regional level and could not be presented on the level of individual practice or practitioner. As such, GDPs considered the available claims data not of the appropriate granularity level as they were not able to recognise themselves in these data. The rigor of the developed measures was confirmed by assessment of the scientific properties of the oral healthcare measures, described in chapter 4, which showed that the measures have face validity and sufficient reliability. The measures were successfully tested for feasibility of collecting data that can be presented as feedback information for GDPs.

In chapter 5, results showed that GDPs hold different views regarding the extent and the way care should be provided. The objective of the study in chapter 5 was to explore perspectives of GDPs on key aspects of oral healthcare, including restorative techniques, prevention, evidence-based practice, patient involvement and continuing education. Findings showed four distinct perspectives: i.) the patient-focused dentist who values prevention, ii.) the outcome-oriented dentist who values learning from colleagues, iii.) the team player with ultimate care responsibility and, iv.) the dentist who considers oral health the responsibility of the patient. The perspectives identified
areas within oral healthcare where GDPs have similar views and areas where they hold different views. Three out of the four perspectives considered the patient-practitioner relationship important in care delivery, whereas the other perspective put lesser value on this. In all four identified perspectives, prevention was considered an important aspect of oral healthcare. The difference between perspectives was in the extent to which prevention should be provided to the patient. These perspectives on oral healthcare could be used to inform targeted quality improvement strategies and to create self-awareness among the GDPs about their own preferences and attitudes. This may in turn help to better match their clinical expertise and knowledge of the evidence-base for their advice and treatments with the values and preferences of patients. Awareness of different views among GDPs can be used to inform discussions when AD is applied. Areas were GDPs have similar views can be used by the academic detailer to start the conversation and create a safe place for sharing opinions. Areas were GDPs have different views can be used to inform the group discussion where different views can be explored in detail and when applicable find suitable action points to improve care delivery. In addition, during AD discussions knowledge on the perspectives can be used to explore whether the variation visible in the feedback information is due to differences in perspectives of GDPs. Furthermore, rich discussions with a variety of new insights might be stimulated by making sure that GDPs with different perspectives are included in the group. Further research is required to confirm the identified perspectives amongst GDPs and to explore the influence of GDPs’ perspectives on care delivery.

Strength of research methods
To date, many care improvement strategies have relied on quantitative approaches to investigate variation in care delivery as an outcome. For example, the number of treatments performed in a particular population in a dental practice or by a GDP is compared to (national) average – assuming that outliers are indicating variation in care that can be considered unwarranted. Such data-driven, normative benchmarking approaches leave little room for qualitative reasoning how decision making on care evolves, and whether such variation can be justified as warranted or perhaps even classified as best practice. Trends in society, individual norms and values of both practitioner and patient nowadays influence decision making in oral healthcare. Moreover, many decisions about oral healthcare are now preference-sensitive. This emphasises the need for acknowledging patients’ needs, preferences and resources in the assessment and improvement of care delivery. This thesis provides a novel, non-normative approach towards quality improvement - the Field Studies approach. This multifaceted approach combines the use of AD and the provision of feedback.
information to intrinsically motivate GDPs to improve care delivery. While the patient-derived data and the claims data provide quantitative information about the use of prevention, treatments and satisfaction, the group meetings and AD provide room for the qualitative reasoning behind the variation exposed by the quantitative data. Multi-faceted approaches are considered to be more effective than solely providing performance feedback information or solely providing AD. The use of peers as moderators of the GDP groups and the use of patient-derived feedback information were important in creating an open and comfortable environment for the GDPs to discuss their care delivery. In contrast to studies which only include process measures that provide information on the number or frequency of treatments and procedure, the ADVOCATE measures include information on context and lifestyle, which are significant factors in improving and maintaining optimal oral health. Data derived from the measures facilitates conversations with patients on individual preferences, needs and values. Another strength of the Field Studies approach was the ability to make cross-country comparisons during the group meetings. This allowed GDPs to discuss oral healthcare in a broader perspective, by exploring the reasoning behind decisions and the role of the oral healthcare systems.

In addition, this thesis builds on both quantitative and qualitative methods to explore and collect data on GDPs’ viewpoints and experiences regarding the Field Studies approach and oral healthcare in general. In chapter 5, Q-methodology was used which combines the strengths of qualitative and quantitative methods. The method provides insight into the subjectivities in a much richer way than could be provided through surveys, while also providing structure and better replicability than purely qualitative approaches. The results of the methods used provide a broad perspective about the conscious and unconscious perspectives of GDPs on care delivery and oral healthcare. In chapter 6, 7 and 8, the use of debriefing forms, notes and focus group interviews provide a more complete picture of barriers and experiences with the Field Studies approach than quantitative surveys only would allow.

**Limitations of research methods**

In the evaluation of the experiences of GDPs and perceived changes in the care they delivered, the Field Studies approach relied on self-report for collecting data. The validity of such data can be questioned, because it relies on the GDPs’ own beliefs and perceptions of their care delivery, and socially desirable responses cannot be excluded. However, since the approach focuses on intrinsically motivating GDPs and reflecting on their care delivery, the GDP is the primary source of information regarding their motivation. Focus group interviews and evaluation forms rely on the
GDPs’ own beliefs and perceptions and not necessarily measure actual change in care delivery. To minimise the effect of socially desirable responses during the ADGs, completion of evaluation forms and focus group interviews, it was explicitly stated to all participants that the Field Studies did not aim at data-driven normative judgements and benchmarking. In addition, due care was taken to create a safe and open environment for the GDPs throughout all phases of this research, for example by the use of trained peers as moderators of ADGs and focus group interviews.

To measure whether significant reduction in variation of delivered care occurred as a result of the Field Studies approach, a longer evaluation period will be needed. The follow-up of Field Studies reported in this thesis (chapters 7 and 8) was too short for this. Moreover, the collection of long-term behaviour and practice data was beyond the scope of this thesis. To provide evidence for causal and temporal relationships of the used approach and changes in care delivery, long-term follow-up data are to be collected. Moreover, larger and less selective groups of GDPs need to be recruited for evaluation of the Field Studies’ effect in daily practice. Measuring effect on unwarranted variation and the use of evidence-based interventions could be the focus of future research.

The aims and objectives of the different studies in this thesis are tested using convenience samples of GDPs from different countries and regions. The use of a convenience sample of GDPs might have resulted in a very selective sample of GDPs. While this may have limited the generalisability of the findings so far, the studies presented in this thesis were not designed to be representative of individual GDPs or clinical dental practice in general. It is likely that the GDPs from the Field Studies have been early-adopters of innovations and change. However, in the context of proof-of-concept and proof-of-principle evaluation, critical but constructive early-adopters have proven to be key in harvesting information aimed at further improvement of the approach before further testing and wider implementation. In particular, the qualitative and mixed methods used have been instrumental for this evaluation.

Finally, the studies in this thesis were performed in selected EU countries. To date, the findings presented in this thesis do not allow for inferences about the feasibility, acceptability, scalability and usefulness of the Field Studies approach in other contexts or situations (regions & countries). Similarly, the findings presented in this thesis were not evaluated for each of the six countries separately. This could potentially have influenced the results. Experiences and sharing of opinions might have been influenced by the social culture that are particular to each country.
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Recommendations

This thesis started with stressing the need to reduce unwarranted variation in oral healthcare and to meet the changing needs and expectations of providing preventive, evidence-based and patient-centred care. The Field Studies approach was developed to improve care delivery by addressing these needs. This thesis provided proof-of-concept of the Field Studies approach.

While the approach was considered acceptable, feasible and useful, special attention for recruitment of GDPs and Stewards, data collection of feedback data and further tweaking of access and use of the patient questionnaire and the dashboard will be needed. As the impact of the Field Studies approach on GDPs motivation has been shown, findings should be seen as preliminary but encouraging. The important question that remains to be answered is: “What is needed to implement the Field Studies approach on a sustainable and larger scale?”

A first step is to address the identified barriers to data collection and data presentation, and to further improve the approach. Logistic and technical barriers should be resolved and improvements should be made to the deployment of both the online patient questionnaire application and the dashboard to increase the willingness of GDPs to implement the approach in their dental practice. Alternatives to the use of electronic tablets should be made available and access to the questionnaire should not only be restricted to the dental practice. Making the patient questionnaire available on paper or through sending an online link via email are examples of ways to decrease barriers relating to data collection. Also, the entire oral healthcare team should be motivated and included in data collection procedures to increase efficiency of data collection. Technicalities of the dashboard and presentation of the data should be simplified and summaries of the data should be made available to GDPs.

The second step is to have a system in place to routinely collect data on the 48 oral healthcare measures. Having data on all 48 measures available will allow GDPs to get an indication of whether he or she fits the average of their region or country. And data can be used to inform GDPs and other stakeholders about areas that require attention (unwarranted variation) and facilitate learning from variation in care. Furthermore, the data can be used to make conversation with patients about the care delivery. For this it is important that data collection becomes part of the daily routine in the dental practice. Incorporating the information on oral healthcare measures in the electronic patient record would facilitate routine data collection and may simplify the distribution of a questionnaire amongst patients. It should be noted that for the
distribution of questionnaire arrangements should be made to maintain safety and privacy regulations.

The third step is having trainings in AD and moderation of groups available. This thesis showed that the ADGs are an essential part of the Field Studies approach and essential for reflecting on care delivery and interpreting the feedback information. Funds should be created to stimulate and organise trainings for GDPs to become Stewards. Another non-financial incentive for GDPs to develop themselves into Stewards would be to have a recognised education programme where GDPs can specialise in research, evidence-based care and AD. This provides recognition for the skills acquired during trainings and could make dental research and evidence-based care more attractive. Being a Steward could provide GDPs with the opportunity to specialise in dental research and play a key role in their own profession and at the same time remain active as a GDP.

The fourth step is to facilitate implementation of the Field Studies approach in GDPs’ dental practices on a large scale. Recruitment of GDPs to participate in the ADVOCATE Field Studies appeared to be challenging in some countries. It is important for GDPs to see and understand the added benefit of the approach in order to encourage participation. By incorporating the Field Studies approach in further training and education, GDPs can be more easily exposed to the approach and the reasoning behind the approach. Professional associations could also play an important role in stimulating the use of the approach. For example, in the Netherlands both the Royal Dutch Dental Association (KNMT) and the association for Dutch dentists (ANT) could take up the approach in the already existing quality improvement groups.

In addition, implementing the Field Studies approach in dental practice could be made more attractive by providing incentives. In the Netherlands, an independent and public register, the foundation quality register for dentists (Kwaliteitsregister Tandartsen KRT), registers further training and education (e.g., courses, trainings) completed by GDPs. KRT points are given for every course or training that has been completed and for quality improvement strategies employed in the dental practice. If one would aim at stimulating the broader implementation of the Field Studies approach amongst GDPs, incorporating the Field Studies approach in the KRT quality improvement courses and awarding points for participation could incentivise GDPs. Policy makers and health insurers may also be interested in supporting the implementation of the Field Studies approach and could provide incentives – by setting up financial rewards or punishments.
On the basis of this thesis, it can be concluded that the approach has the potential to improve oral healthcare towards more patient-centred care and possibly towards more prevention-oriented and evidence-based care. The technical aspects of data collection and organisational aspects of the meetings itself need to be fine-tuned to gain efficiency. Research into the long-term impact of the approach on variation in oral healthcare and improved care delivery should be encouraged. To that end, longitudinal measurement of variation in clinical dental practice is required. Furthermore, trainings into AD and evidence-based practice are needed to be able to implement the Field Studies on a larger scale. The implementation of the Field Studies approach in the dental practices should be monitored closely to facilitate optimal uptake of the approach amongst dental professionals.

**CONCLUDING REMARK**

Results of this thesis showed that the Field Studies approach, consisting of AD and feedback information, is considered to be feasible and acceptable to improve care delivery when technical and logistic problems are resolved. GDPs consider the approach useful to stimulate reflection and discussion on care delivery, particularly on patient-centred care and patient communication. The presence of academic detailers and feedback information were important to stimulate reflection and learning from variation in care. Recommendations for a wide implementation on the approach in oral healthcare are provided. This thesis provides a novel approach with the potential to provide more transparency, shared decision making and evidence-based practice in the dental practice. Herewith, this thesis contributes to a scientific foundation for improving oral healthcare towards prevention, patient-centred and evidence-based oral healthcare with which I hope will ultimately contribute to optimising oral healthcare and creating an open and safe environment for both patient and practitioner.
REFERENCES