The effects of the medical review as part of the Transmural Palliative Care Pathway, and the barriers and facilitators for implementation.

Master thesis

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01-07-2017

zuyderland

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Gewenste zorg in de laatste levensfase

Preface and acknowledgements

This study named ‘the effects of the medical review as part of the Transmural Palliative Care Pathway, and the barriers and facilitators for implementation’ is a master thesis project performed on behalf of Zuyderland. The master thesis is the last project for my master Healthcare Policy, Innovation and Management at the University of Maastricht. The aim of this study is to investigate the effects of a medical review performed by a pharmacist in palliative care in the Westelijke Mijnstreek (TPCP), and the barriers and facilitators for implementation.

During this research, I acquainted with the medical reviews performed within the Transmural Palliative Care Pathway (TPCP) project. I experienced that innovations like the medical review with palliative patients entail a lot of difficulties. For innovations like this to work, good collaboration and cooperation between several healthcare professionals is critical.

I would like to thank several people for their help with completing this report. First, J. Meijers for her critical view on my thesis, her advising comments and the feedback she provided. Furthermore, I would like to thank M. Pasmans and L. Dijkstra for giving advice regarding this study. Finally, I would like to thank the participants of this study, the pharmacists and patient/relative, without which I would not be able to answer the research questions of this study.

Christian Hanouwer

Maastricht, 24th of June 2017

Abstract

Background: People are more and more in need of palliative care as a result of the increasing amount chronic diseases among those people. Because palliative patients cannot be cured, the focus of palliative care is on caring and improving the patients' quality of life. However, currently palliative care has a lot of bottlenecks. To tackle those bottlenecks, Zuyderland developed a multidisciplinary pro-active approach regarding palliative care. This approach was named the 'Transmural Palliative Care Pathway' (TPCP) and is still in its pilot phase. This Care Pathway is part of the project; desired care in end of life. This pathway consists of a number of elements. This report studies one element of the TPCP, namely: the medical review with the pharmacist. The medical reviews focus on optimizing pharmacotherapy and reducing polypharmacy. However, knowledge regarding the effects of the medical review with palliative patients, and barriers and facilitators for implementation is currently missing.

Aims: The aim of this study was to investigate the effects of a medical review performed by a pharmacist in palliative care in the Westelijke Mijnstreek (TPCP), and the barriers and facilitators for implementation.

Methods: To study the effects of the medical reviews with palliative patients, and the barriers and facilitators for implementation within the TPCP project, three different data collection methods were used. Three interviews with pharmacists were conducted (N=3), one observation of the medical review was performed (N=1), and one survey was handed out to a participant of the medical review (N=1).

Results: The results show that few medical reviews are performed during the period of this study. However, the one that was performed resulted in a satisfied patient. Few medical reviews are performed because the review is not on added value for every patient included in the TPCP. Furthermore, most patients are too confused, sick, deceased or hospitalized before the medical review could have taken place. In addition two other reasons why few reasons are performed is that the medical review is confronting for both patients and pharmacists, and the number of participating GPs. Regarding the effect of the review, sometimes medication is added after the medical review, for instance pain relieving medication. And sometimes medication is stopped, for instance medication with a long-term effect. Moreover, the medical reviews seem successful in decreasing patients' uncertainties regarding their medication use.

Discussion: Research about the effects of medical reviews with palliative patients, and the barriers and facilitators was not conducted before this study. However, the results of this study are only directly applicable within the boundaries of the TPCP. Other limitations concern the few observations performed, and the few surveys received.

Conclusion: The TPCP and thus the medical reviews still in pilot phase. However, further implementation in the future is recommendable.

Samenvatting

Achtergrond: Mensen hebben steeds meer nood aan palliatieve zorg als gevolg van de groei van chronische ziektes onder deze mensen. Omdat palliatieve patiënten niet genezen kunnen worden, is de focus van palliatieve zorg op het verzorgen en het verbeteren van de kwaliteit van leven. Echter, op het moment heeft palliatieve zorg een aantal knelpunten. Om deze knelpunten tegen te gaan heeft Zuyderland een multidisciplinaire pro- actieve aanpak ontwikkelt betreft palliatieve zorg, namelijk het Transmuraal Palliatief Zorgpad, wat onderdeel is van het project; Gewenste Zorg in de Laatste Levensfase. Op het moment bevindt het Zorgpad zich in een pilot fase. Het Zorgpad heeft een aantal elementen. Deze studie onderzoekt één element; de medicatie beoordeling met de apotheker. Bij de medicatie beoordeling ligt de focus op optimalisatie van de farmacotherapie en het verminderen van polifarmacie. Echter, kennis over de effecten van de medicatie beoordeling met palliatieve patiënten, en de barrières en facilitatoren voor implementatie missen op het moment.

Doelstelling: Het doel van deze studie is te onderzoeken wat de effecten zijn van de medicatie beoordeling binnen het Zorgpad, en de barrières en facilitatoren voor implementatie.

Methodes: Voor dit onderzoek zijn drie verschillende methodes gebruikt om data te verzamelen. Drie interviews zijn gehouden met apothekers (N=3), één observatie van een medicatie beoordeling is uitgevoerd (N=1), en één vragenlijst is uitgedeeld aan een deelnemer van de medicatie beoordeling.

Resultaten: De resultaten laten zien dat weinig medicatie beoordelingen uitgevoerd zijn tijdens de onderzoeksperiode van deze studie. Echter, de beoordeling die was uitgevoerd resulteerde in een tevreden patiënt. Weinig medicatie beoordelingen zijn uitgevoerd omdat de beoordeling niet voor elke patiënt binnen het Zorgpad meerwaarde heeft. Tevens, de meeste patiënten zijn te verward, ziek, overleden of opgenomen voordat de beoordeling plaats heeft kunnen vinden. Daarnaast, twee andere redenen waarom medicatie beoordelingen niet worden uitgevoerd is dat het patiënten en apothekers confronteert met de dood, en de tweede reden betreft het aantal participerende huisartsen. Met betrekking tot het effect van de medicatie beoordeling; soms is medicatie toegevoegd na de beoordeling, en soms wordt medicatie gestopt. Bovendien, de medicatie beoordeling lijken succesvol in het verminderen van onzekerheden betreft medicatiegebruik van de patiënten.

Discussie: Onderzoek naar de effecten van medicatie beoordeling met palliatieve patiënten, en de barrières en facilitatoren is niet uitgevoerd vooraf aan deze studie. Echter, de resultaten van deze studie zijn alleen toepasselijk binnen de kaders van het Zorgpad. Anders beperkingen betreffen het aantal uitgevoerde observaties en ontvangen vragenlijsten

Conclusie: Het Zorgpad en dus de medicatie beoordeling zitten nog in de pilot fase. Echter, verdere implementatie in de toekomst is aanbevolen.

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1. Introduction

1.1 Background

1.1.1 Palliative care

A well-known trend in the Dutch society, as in most other western countries, is the aging of the population. According to the CBS (2016) 18 percent of the Dutch population is over the age of 65, which will rise to a maximum of 26 percent in the year 2041. The aging of the Dutch population led to an important challenge for the Dutch healthcare sector, namely: an increase of the prevalence of chronic diseases (Reinhardt, 2003). People with chronic diseases like cancer and COPD or other life threatening diseases are in need of palliative care. Because the diseases of palliative patients cannot be cured, the focus is not on curing but on caring and improving the quality of life of palliative patients in the last phase of their lives (Envida, 2016). Palliative care can be defined as 'an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual' (WHO, 2002). Palliative care has the ability to improve the quality of life of patients and their relatives in the last phase of the patient lives (Envida, 2016).

The Dutch government demands that patients receive palliative care, where and whenever they need. However, in practice this is not always the case. It is not clear for patients and their relatives where and how they can receive palliative care (Envida, 2016). Moreover, palliative care has not always been of good quality (Albers et al., 2010). The quality of palliative care is defined by Groot (2000) as 'the judgement of terminal patients and their relatives on the way palliative care is organized and provided by formal and informal caregivers'.

According to Soeters and Verhoeks (2013) there are three main bottlenecks regarding palliative care: there is too little pro- active acting in palliative care, regular healthcare professionals do not have sufficient knowledge and experience with palliative care and there is too little cooperation, information sharing and attunement between involved healthcare professionals. To improve palliative care, it is important for healthcare professionals to tackle those bottlenecks.

Moreover, Zuyderland (2015) mentioned similar and additional bottlenecks regarding palliative care: Palliative care has a reactive focus instead of a pro- active focus, there are too little palliative consultations, varying knowledge about palliative care exists between different healthcare professionals, there is not enough support by experts, there is little collaboration and attunement between healthcare professionals, palliative patients are identified in a late stage, there is lack of knowledge about the patients preferences regarding palliative care and needs and there is a need for medicine attunement improvement. To handle and tackle those bottlenecks, Zuyderland developed a multidisciplinary pro-active approach regarding palliative care. This approach was named the

'Transmural Palliative Care Pathway' (TPCP). This Care Pathway is part of the project; desired care in end of life.

1.1.2 Transmural Palliative Care Pathway

As mentioned in paragraph 1.1.1, to tackle the bottlenecks regarding palliative care, a pro-active multidisciplinary approach has been developed: the Transmural Palliative Care Pathway (TPCP). The implementation of the TPCP project started in December 2015, and is at the moment still in its pilot phase. The TPCP is a pro- active multidisciplinary approach for palliative patients, whereby collaboration between different healthcare actors is required. Those actors include several healthcare organizations and professionals in the Westelijke Mijnstreek (South Limburg), namely: Hagro Geleen/ Sittard and associating pharmacists, general practitioners, nurse practitioners and case managers; Oncologists and geriatricians Zuyderland Medical Concern location Sittard; Palliative consultants and specialized nurses. The goal of the pathway is to improve accessibility and continuity of palliative care, and to optimize palliative care in terms of effectiveness, efficiency, and patient centeredness (Transmuraal Zorgpad, 2014).

The pathway includes a number of elements (figure 1): early identification and registration of palliative patients, a consultation in which the identification of the patient as a palliative patient is discussed, a palliative care assessment with the patient and his or her relatives, multidisciplinary collaboration and consultation between intra- and extramural healthcare professionals, a medical review by the pharmacist, the creation of a proactive care plan, counselling and monitoring of the palliative patient by the care coordinator, and after the death of the patient a closing evaluation with the relatives of the patient.

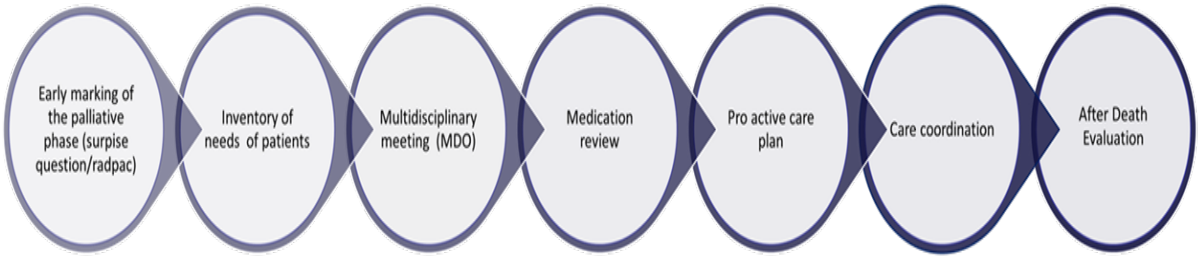

Figure 1: Transmural Palliative Care Pathway

1.1.3 Medical review

Most elderly have multiple diseases, and for those diseases elderly use different kinds of medication (polypharmacy). The use of different kinds of medication increases the risk for undesirable and negative effects (Nederlandse Huisartsen Genootschap, 2010). Controlling the patient's medication use, undesirable effects like hospitalization can be reduced or avoided. To illustrate, 2.6 percent of all hospital admissions are a result of medicine misuse (Nederlandse Huisartsen Genootschap, 2010). It is important to prevent problems like hospitalization as a result of medicine

misuse because it leads to more healthcare costs and a reduced patient satisfaction. Methods to reduce medicine misuses are the medical reviews.

This study will thus focus on one element of the Transmural Palliative Care Pathway, namely: the medical reviews for palliative patients by the pharmacist. A medical review can be defined as a state of collaboration between pharmacists, general practitioners (GPs) and patients whereby the pharmacotherapy is being optimized and in which risks for polypharmacy are reduced (KNMP, 2017). According to the Dutch GP Association (2010) a medical review consists of four steps, namely: use analysis, medical analysis, treatment analysis and a treatment conservation. The medical reviews performed within the Transmural Palliative Care Pathway, the palliative reviews, consist of the several steps. First, the GP/doctor includes palliative patients for the TPCP. Next, the patient's medical information is collected, and the patient is registered for the MDC (consultation between several healthcare professionals, including a pharmacist, where palliative patients of the TPCP are discussed). Subsequently, the pharmacist plans a conversation with the concerning patient (medical review) to discuss the patient's medication use. However, not all patients included in the TPCP, do eventually participate with the medical review. Thereafter, the pharmacist performs a pharmaceutical analysis; meaning that the pharmacist will criticize the patients' medication use. For instance, whether medication can be added to comfort the patient by pain relieving medication, or whether medication can be stopped when it is not needed. After the analysis, the pharmacist will consult with the concerned GP/ doctor. And finally, the GP/doctor provides feedback towards patient and further steps will be discussed and determined (figure 2)

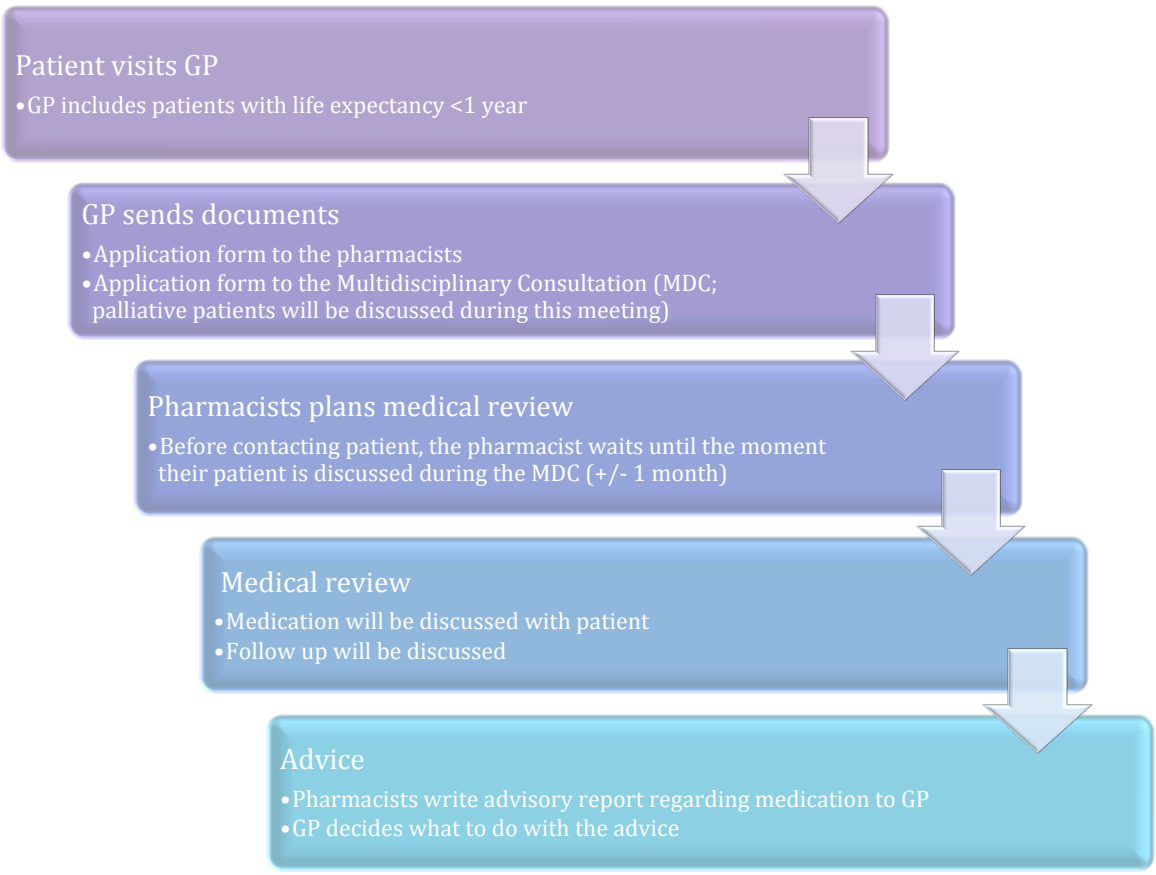

Figure 2: process medical review (TPCP)

Because there is no golden standard regarding medical reviews (Kwint, 2014; Nederlandse Huisartsen Genootschap, 2010), and there is a lack of knowledge in the healthcare sector and almost no knowledge in the palliative care sector about the usability of medical reviews in practice and their effects (Nederlandse Huisartsen Genootschap, 2010); more research is required to gain knowledge about the usability and effects of medical reviews in palliative care.

This study will conduct research about the effects of the medical review by the pharmacist in the Transmural Palliative Care Pathway project, and the barriers and facilitators for the implementation process of the medical review. This research will be conducted at several TPCP locations in the Westelijke Mijnstreek (South Limburg).

1.2 Research question

There is little knowledge about the effects of medical reviews in the palliative care phase. This study explores the effects of the medical review within the TPCP project. In addition, this study also includes a process evaluation about the barriers and facilitators of the medical review of the implementation process of the medical review within the TPCP. The research question of this study is the following: *What are the effects of a medical review performed by a pharmacist in palliative care in the Westelijke Mijnstreek, and what are the barriers and facilitators for implementation*?

1.2.1 Sub questions 'effects'

1. Are patients and their informal caregivers satisfied about the content of the medical reviews?
2. Are patients and their relatives satisfied about the information provisioning of the medical reviews?
3. Is there a decrease in medication prescription by the pharmacists as a result of the medical reviews?
4. Are the medical reviews successful in decreasing uncertainties of the patients regarding their medication use?
5. Why do not all the patients of the Transmural Palliative Care Pathway participate in the medical review of the Transmural Palliative Care Pathway?

1.2.2 Sub questions 'barriers and facilitators'

1. Is the implementation process of the medical reviews successful, considering the criteria of Saunders (2005)? (Fidelity (quality), dose delivered (completeness), dose received (exposure), dose received (satisfaction), reach (participation rate), recruitment and context).
2. What are the barriers and facilitators for the implementation of the medical review?

Table 1: Research question and sub questions definitions

Term	**Definition**
Medical review	A review of the pharm therapy by the patient, GP and pharmacist, on the basis of periodic structured, critical evaluation of the medical, pharmaceutical, and the information of use (KNMP, 2013).
Palliative care	An approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual (WHO, 2002).
Patient satisfaction (healthcare)	An individual's evaluation of the quality of care in a specific medical-care situation (Shore and Frank, 1986).
Criteria of Saunders (2005)	*Paragraph 2.1.2*

1.3 Overall research approach

In order to answer the research questions of this study, a combination of qualitative methods and quantitative methods – so called mixed methods - were used. The researcher of this study observed several medical reviews, conducted interviews with pharmacists, and surveys were handed out to patients who participated regarding the medical reviews.

2. Theory and conceptual model

This chapter will discuss the theory of this study and consists of the following elements; paragraph 2.1 (theory) which includes 'the success of an innovation' (paragraph 2.1.1) and 'assessing implementation' (paragraph 2.1.2). And to summarize the theory used for this study, a conceptual model is represented in paragraph 2.2.

2.1 Theory

2.1.1 The success of an innovation

The implementation processes of innovations are always influenced by several characteristics, which means that the success of such innovations depends on those characteristics (Grol, 2013). Rogers (2003) and Grol (2013) describe five main characteristics of innovations on which the success of the innovations is based. These characteristics are benefit, compatibility, complexity, triability and visibility. The characteristics mentioned above will be written in italic in this chapter.

Benefit is 'the degree to which the innovation can be seen as an improvement on existing practice' (Grol, 2013). In practice, only the innovations that have benefit over other alternatives are implemented. Relating to this study, does the medical review add value for patients and their relatives in comparison with their alternative treatments? Other examples of advantages can be a reduced workload for healthcare professionals, less medication use, increased patient satisfaction et cetera. New innovations can also bring disadvantages like an increased workload for healthcare professionals, increased medication use, reduces patient satisfaction et cetera. If an innovation is implemented, often depends on the balance between the advantages and disadvantages and for whom those (dis) advantages count (Grol, 2013).

Compatibility is 'the degree to which the innovation complies with existing opinions, needs, norms, values and routines (Grol, 2013). If the innovation is not compatible with norms and values of the users and or target group, the implementation of the innovation will probably be not successful. Regarding the medical review, the pharmacists are the users and the palliative patients of TPCP are the target group. An example for this study; if the degree in which the medical reviews will fit within the routines of the pharmacists is high, the more successful the implementation will be.

Complexity is 'the degree to which a new working method is considered to be difficult to understand, multifaceted and/or awkward to use' (Grol 2013). The more complex an innovation will be, the more difficult it will be to implement. Regarding this study, reasons for complexity can concern for example the reimbursement of the medical review, or the complexity of the medical review within the Transmural Palliative Care Pathway because this pathway has more elements.

Triability is 'the degree to which individuals can attempt the innovation on a small scale, without the risk of becoming overwhelmed by its consequences' (Grol, 2013). The triability of an innovation helps users and or target groups to discover the added value of the innovation.

And finally the *visibility* or observability is 'the degree to which the results of a new working method are made apparent or visible' (Grol, 2013). Successful implementation will probably increase when positive results of the medical review are shown in practice.

Greenhalgh (2004) also describes those five elements as the 'success' factors of different innovations. However, Greenhalgh (2004) supplements six more elements to that list, which are: reinvention, fuzzy boundaries, risk, task issues, knowledge required to use it and augmentation/ support. Those characteristics will be written in italic in this chapter.

Reinvention is 'the degree in which potential adopters can adapt, refine or otherwise modify the innovation to suit their own needs' (Greenhalgh, 2004). The higher this degree will be, the greater the chance of successful implementatio§n. For the medical review, if pharmacists can adapt the process of the medical review, it will probably be more successful. For example, when the referral process between the pharmacist and GP can be flexible adapted, there will probably be more medical reviews.

Fuzzy Boundaries is 'the adaptiveness of the organizational structures and systems required for the full implementation of the innovation (soft periphery)' (Greenhalgh, 2004). If the adaptiveness of the 'soft periphery' is high, the implementation will probably be more successful. This means if the organization where the medical review will take place is not flexible in adopting the medical reviews, it will be harder to implement. For example, if there are no rooms available for the medical reviews, the organization has a low 'soft periphery'.

Risk is described is 'the degree of uncertainty of outcome that the individual perceives as personally risky' (Greenhalgh, 2004). If the *risk* of an innovation is high, the chance of a successful implementation is reduced. Patients can experience the medical review as 'risky', when for example the outcomes of the medical review are not clear, while the patients have to pay a fee for the medical review.

Task issues are described as the feasibility and workability of an innovation regarding their users. 'If the innovation is relevant to the performance of the intended user's work and if it improves task performance; it will be adopted more easily' (Greenhalgh, 2004). To implement the medical reviews, it is important that the pharmacists (performers) and even the GPs experience the medical reviews as relevant to their performance. Moreover, the same applies for the patients, because they might have to pay a fee for the medical review.

Knowledge Required to Use It is described as 'the ability to transfer and codify the required knowledge for usage, from one context to another' (Greenhalgh, 2004). If this ability is high, the chance of successful implementation is increased. This element has a high correlation with the element '*Complexity*' of Grol (2013).

And finally *Augmentation/ Support* is 'the degree to which the innovation is supported by a help desk, training, manual et cetera' (Greenhalgh, 2004). The *Augmentation/ Support* increases the

chance of successful implementation. If the medical review is supported by protocols for the pharmacists, for example a 'how to perform the medical review with palliative patients' protocol, it will probably be more successful.

2.1.2 Assessing implementation

In order to supplement the theory of Rogers (2003), Grol (2013) and Greenhalgh (2004), the theory of Saunders (2005) is to be used. As mentioned in paragraph 1.2 this study will perform a process evaluation of the barriers and facilitators of the medical review in the implementation process. Saunders (2005) presents a 'comprehensive and systematic approach for developing a process-evaluation plan to assess the implementation of a targeted health promotion intervention'. Those process evaluation plans include the following elements: fidelity (quality), dose delivered (completeness), dose received (exposure), dose received (satisfaction), reach (participation rate), recruitment and context. The seven elements will be written in italic in this chapter.

Fidelity (quality) is described as the extent to which an intervention was implemented as planned (Saunders, 2005). To determine *fidelity (quality)*, criteria for a quality implementation of the intervention must be established beforehand. For this study, it must be determined what kinds of criteria for the quality of implementation of the medical review were established.

Dose delivered (completeness) is described as 'the amount or number of intended units of each intervention or component delivered or provided by interventionists' (Saunders, 2005). In order to determine *dose delivered (completeness)*, it is important that the proposed intervention is properly described. For the medical review it is important that dose is determined. For example, is the protocol performed, as it should be?

Dose received (exposure) is 'the extent to which participants actively engage with, interact with, are receptive to, and/or use materials or recommended resources; can include "initial use" and "continued use' (Saunders, 2005). To determine *dose received (exposure),* firstly the envisaged activities should be properly described. For this study, are the medical reviews performed according to the 'initial use' and recommendations?

Dose received (satisfaction) is 'participants (primary and secondary audiences) satisfaction with program, interactions with staff and/or investigators' (Saunders, 2005). In order to determine *dose received (satisfaction),* clarity must exist about which areas to measure regarding the opinions of people involved. Are the patients satisfied about their treatment regarding the medical reviews?

Reach (participation rate) is 'the proportion of the intended priority audience that participates in the intervention'. To determine the *reach (participation rate),* it has to be determined who exists in the envisaged target population. Does the medical review includes all palliative patients of the Westelijke Mijnstreek included in the TPCP project like intended in this project or is there a difference between those patients, which will determine inclusion?

Recruitment is 'procedures used to approach and attract participants at individual or organizational levels' (Saunders, 2005). *Recruitment* includes different ways regarding how participants are retrieved. So for this study for *recruitment* it is important to determine if patients referred appropriately by the GPs to the pharmacists.

And finally the *context* is 'aspects of the environment that may influence intervention implementation or study outcomes' (Saunders, 2005). For the medical reviews it is important to determine what those influencing factors are. For example the health insurers probably have great influences on the medical reviews regarding reimbursement, or the stage of disease in which the different palliative patients are.

2.2 Conceptual model

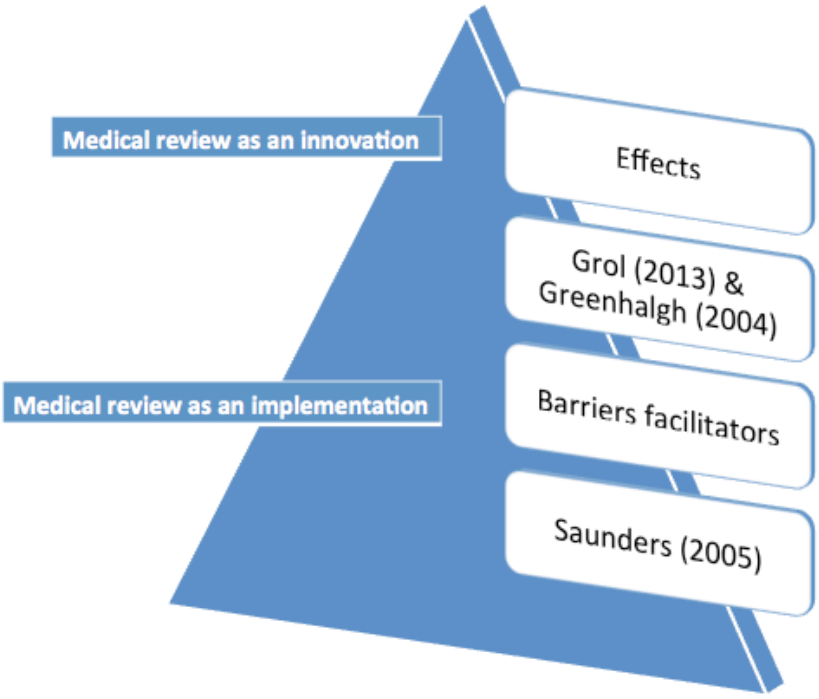

Figure 3: Conceptual model

3. Methodology

In this chapter the methods used for performing this study are presented. First, the research design is discussed in paragraph 3.1. Second, in paragraph 3.2 the sampling methods and data collection methods are explained. Third, in paragraph 3.3 the methods of analysing the collected data are explained. And finally, paragraph 3.4 discusses the reliability and validity of this study.

3.1 Research design

This study has both a quantitative- and a qualitative approach, which is known as the mixed method approach (Polit et al., 2012). This mixed method approach is cross-sectional, because the researcher of this study conducted research at one point in time. The cross-sectional research approach is relatively simple and costless (Polit et al., 2012).

The mixed methods approach implies that the nature of this study has two directions, namely explorative and explanative (Polit et al., 2012). Qualitative research (explorative) was conducted to gain more in depth information about the different perspectives of the pharmacists regarding their knowledge and insights about the effects of the medical review, and barriers and facilitators of the implementation process of the medical within the TPCP. For this qualitative approach two different methods were used, namely; 'interviews with pharmacists' and 'observations of the medical reviews'. The explorative direction fits with this study because this study aims to get more insight regarding the medical review process and effects. Quantitative research (explanative) was conducted to gain knowledge about patient satisfaction and information provisioning by the medical review for those patients included. Moreover, because the data collection for this part of the research is conducted directly after the medical review itself, an interview with the patients would probably be highly subjective. Therefore, a method in the form of a survey, which patients can fill in at home, was better suited. In addition, all three data collection methods were conducted in the period 'end of April 2017 until the beginning of June 2017'.

3.2 Data collection and sampling method

3.2.1 Sample/ Participants

In the Transmural Palliative Care Pathway (TPCP) nine different pharmacists agreed participating with the medical reviews. The number of medical reviews they performed since the start of the TPCP project differs between the pharmacists. Furthermore, for the TPCP project, approximately 60 patients are currently (at the start of this study) included. However, only six of those 60 patients participated with the medical review.

For this study the pharmacists who did perform two or more medical reviews in the period 'December 2015 – which was the start of the Transmural Palliative Care Pathway – and April 2017 – which is when the data collection phase of this study did start' -, were included (interview). One of the initiators and project group member of the TPCP project among the pharmacists regarding the TPCP project was also included for the interview.

Furthermore, the researcher of this study attended all medical reviews of the Transmural Palliative Care Pathway in the period 'end of April 2017 until the beginning of June 2017' to observe the medical reviews. During this conversation, an informal caregiver or relative of the patients did also attend.

In addition, after the observation the researcher provided the patients with a survey, which they could fill in at home. This means that the patients who participated in the medical review in the period 'end of April 2017 until the beginning of June 2017', were also asked to fill in a survey at home regarding the medical review.

3.2.2 Measurement

As stated in paragraph 3.2.1, for this study three different methods for collecting data were used. The interview was constructed in a semi-structured order. Semi-structured interviews are well known tools for exploring approaches (Polit et al., 2012). In a semi-structured interview the topics of the conversation are fixed. However, specific questions and the order of those topics of the interview are not fixed. This means that the researcher has the possibility the gain more in-depth information. Therefore, a topic list was used during the interviews (appendix 2). The topic list consisted of three main topics, namely; medical review (8), participants medical review (palliative patients)(5) and barriers (7). Eight questions were used to cover the medical review topic, and five questions were used to cover the patient's topic. The questions for both topics were based on the theory of Grol (2013) and Greenhalgh (2004). Seven questions were used to cover the barriers topic. Those questions were based on the theory of Saunders (2005). The questions asked in the interview were open-ended. An open-ended question enables the interviewee answering questions, which includes more information, feelings, attitude et cetera (Polit et al., 2012). In addition, according to Cohen et al. (2006), a semi-structured interview provides a 'clear set of instructions for the interviewers and therefore (can) provide reliable qualitative data', which means a higher consistency.

For the observational methods, the researcher will quote the key findings with the help of an observation document, which can be found in appendix 3. This observation document consisted of two parts; the protocol and several observing notifications, which were based on the questions of, paragraph '1.2.1 Sub questions 'effects''. During the observation, the researcher did observe the compliance with the protocol, and the notifications, which can be found in appendix 3.

The surveys especially contain questions, which are in line with the five sub questions 'effects' of paragraph 1.2.1. So in developing those survey questions, the sub questions 'effects' were used as guidance. The surveys consisted of nine questions, and were 4-point Likert scaled orientated. The 4-point Likert scale ranges from totally agree to totally disagree (appendix 1).

3.2.3 Procedures

The pharmacists who were included for the interviews were approached via one of the initiators of the TPCP project. The interviews were held in the period 'end of April 2017 until the

beginning of June 2017'. The interviews with the pharmacists were face-to-face. Furthermore, the researcher did audio-record the interviews with the help of a recording device. Before recording the interview, the pharmacists were asked for permission for audio-recording the interview. After the interview, the researcher did forward the transcripts to the pharmacists.

Regarding the observation, the researcher asked permission for observing the medical review of the pharmacists, but also of the patients and their relatives/ informal caregiver. The researcher did attend all medical reviews performed in the period 'end of April 2017 until the beginning of June 2017'. Before starting the observation, the patient or their relative/ informal caregiver had to sign an informed consent form (appendix 4).

For the quantitative approach, surveys were handed out to patients and their relatives/ informal caregivers who participated in the medical review in the period 'April 2017 – June 2017'. As an addition, the researcher provided an envelope with the address of the researcher and a stamp. In this way patients have the opportunity, to send the survey by post for free. As a result - because the patients were asked to fill in the survey at home - the response rate was expected to be high. When there is no response, the pharmacist is contacted after which the pharmacist will call the patient.

3.3 Data analysis

As stated in paragraph 3.2.3, the interviews with the pharmacists were recorded, after which transcripts were made of those recordings by the researcher. Those transcripts were written in the form of a word-document. Subsequently, those transcripts were coded with the help of a coding scheme. This coding scheme can be found in appendix 7. In qualitative research coding means that 'raw data is being organized into conceptual categories and creates themes or concepts' (Neuman, 2011). This was done through three different steps, namely: open coding, axial coding and selective coding (Neuman, 2011). In the first step - open coding –, the data was analysed by the researcher and primarily codes were created. In the second step – axial coding -, the researcher organized and linked the different codes. In this step, key analytic categories were discovered. Finally, in the last step of coding – selective coding -, the researcher examined the previous codes 'to identify and select data that would support the conceptual coding categories that were developed' (Neuman, 2011). The different codes were based on the theory mentioned in chapter 2, namely: the theories of Grol (2013), Greenhalgh (2004), and Saunders (2005).

For the data analysis of the quantitative data, the researcher received all the surveys. As mentioned in paragraph 3.2, the surveys consist of Likert scaled (4) questions (9). The data of the surveys were coded. The surveys were coded with the help of the sub questions of this study, which were relevant for the survey (five in total). After the coding phase, the data was transformed into the statistical programme SPSS. In this statistical programme, a descriptive analysis of the data was performed. The most important factor of the descriptive analysis for this study is the frequency.

3.4 Validity and reliability

3.4.1 Validity

The internal validity of this study was increased by the means of a contact, which informs the pharmacists included for the interviews of this study (Neuman, 2011). The internal validity is probably higher because it was expected that the correct response rate (2) would be obtained, as a result of the contact that informed the two pharmacists. However, as a result of selecting pharmacists via a contact, and not selecting pharmacists within the TPCP randomly, selection bias occurred. This selection bias threats the internal validity of this study (Neuman, 2011).

In the theory section of this study, theories of three different authors were elaborated, namely: Grol (2013), Greenhalgh (2004), and Saunders (2005). Those theories were used for the development of the topic list and the survey. In addition, those theories are also tools for understanding the data that was collected, and for analysing that data (Creswell, 2009; Neuman, 2011). The use of those different theories did increase the construct validity. Furthermore, by letting two experts – an epidemiologist, and a pharmacist - check the accuracy of the content topic list and surveys, the content validity of this study was increased (Creswell, 2009).

Because the medical reviews by the pharmacists are part of the Transmural Palliative Care Pathway, the external validity is not expected to be high since this concerns a very specific group, namely: the palliative patients of the TPCP. This means that the results are only representative for the patients of the TPCP, and not directly for other patients of medical reviews external of the TPCP. However, the results of this study can be used as a guideline or example regarding effects of medical review, and the barriers and facilitators of implementation.

3.4.2 Reliability

The Likert scaled (4) survey enables response bias to occur (Neuman, 2011). It is possible that the respondents of the survey for example agree with every question, as a result of a high self-esteem or a strong tendency agreeing with all questions. However, for this study response bias probably tends to occur as a result of the patients their health status, because it is possible that palliative patients are too sick or too confused and cannot participate with the survey. By letting the relatives/ informal caregiver fill in the survey for the patients, the response bias for this study can be decreased, which means that the reliability and validity of this study is higher. However, as a result of this 'proxy method', it is possible for information bias to occur (Creswell, 2009).

By developing 'unambiguous, clear questions' for the interviews and surveys - through which the questions can easily been reproduced and understood -, the reliability is increased (Creswell, 2009; Neuman, 2011). This was done with the support of the theory as mentioned in chapter 3. Furthermore, the reliability is improved by using coding methods (Creswell, 2009). As mentioned in this chapter, data was analysed according three coding steps, namely: open-coding, axial coding, and selective

coding. In addition, because research for this study is conducted by one researcher, the consistency of this study will be higher, and thus the reliability.

After the interviews, the recordings were transcribed. The researcher of this study did send those transcripts to the interviewees, after which they checked the content of the transcripts. If the interviewees preferred a summary of the transcript, a summary was send. By letting the interviewees check the content of the transcript/ summary, the reliability of this study is increased.

4. Results

In this chapter the results of this study are presented. First, the results regarding the effects of the medical review are discussed in paragraph 4.1. Second, in paragraph 4.2 the results regarding the barriers and facilitators of the medical review are discussed. In both paragraph 4.1 and 4.2, the results are discussed per sub question, which are mentioned in paragraph 1.2.

Three pharmacists that met the inclusion criteria agreed to participate with an interview regarding this study (N=3) (response rate 100%). The initiator of the TPCP project was contacted because she was expected to provide more in depth information regarding the TPCP project. It must be mentioned, the initiator did not yet perform a medical review prior to the interview. Furthermore, the researcher performed one observation regarding the medical reviews within the Transmural Palliative Care Pathway, which was the maximum number of medical reviews performed within the TPCP in the period of this study. Moreover, the researcher provided the patients with questionnaires after the observation. The response rate for the questionnaires was 100% (1/1).

4.1 Effects

4.1.1 Are patients and their informal caregivers satisfied about the content of the medical reviews? & 4.1.2 Are patients and their relatives satisfied about the information provisioning of the medical reviews?

According to the questionnaire the patient agreed that all subjects the patient wanted to discuss were discussed during the medical review. The patients did not want to discuss other issues, which were not discussed during the medical review. Furthermore, according to the two pharmacists who performed medical reviews prior to the interview, the patients seemed satisfied with the medical review, and the thus the information provided. In addition, according to the questionnaire the patient agreed that all the subjects of the medical review (appendix 6) were elaborated enough upon during the observation. All the subjects contained the right amount of information. Moreover, the researcher also noticed this during the observation of the medical review. This means with those results the medical reviews have achieved a satisfaction of 100%.

4.1.3 Is there a decrease in medication prescription by the pharmacists as a result of the medical reviews?

According to the interview of the pharmacists, the medication prescription after the medical review differs comprehensibly between patients. Sometimes the medication prescription remains the same after the medical review; sometimes certain medication like statins (cholesterol lowers) is stopped, or in some cases, medication like pain relieving medication is added. The reason for not stopping medication, which is not sufficient anymore for palliative patients, for instance medication with a long-term effect (statins), is that patients do not want the medication to stop, because the palliative patients consider their medication as their main supporting tool, and without the medication they feel lost. The pharmacists feel like they cannot stop any medication if the patients do not agree.

The pharmacists discuss the matter with the concerned GP, after which the GP acts or does not act upon the advice of the pharmacist.

According to the questionnaire certain medication was stopped after the medical review. However, the particular medication that has stopped after the medical review is not mentioned. In contrary, sometimes medication is added, like pain relieving medication. This is the case when the patients suffer side effects of current medication use or have any pains.

4.1.4Are the medical reviews successful in decreasing uncertainties of the patients regarding their medication use?

According to the interview with one pharmacist, patients often do not know why they use certain medication. The reason for using different kinds of medication is then explained by the pharmacist. In addition, according to the questionnaire the patient had fewer uncertainties regarding her medication use after the medical review. However, another pharmacist stated that palliative patients who participated with the medical review, which are six, have very little uncertainties regarding their medication use. Moreover, during the observation, the researcher noticed that the patient has a lot of knowledge regarding the medication the patient uses and very little uncertainties. Furthermore, this patient almost never forgot to take her medication. In addition, all pharmacists notice that patients feel like the medication is something they can rely on; it is their support. Consequently, the three pharmacists state that stopping any medication does not please the palliative patients.

"Patients have the feeling of 'let's keep it this way'. It is their support and it should not be all gone"

4.1.5Why do not all the patients of the Transmural Palliative Care Pathway participate in the medical review of the Transmural Palliative Care Pathway?

The GP includes palliative patients in the TPCP. However, not all included patients eventually participate with a medical review. According to the pharmacists, there are two main reasons for this matter. These are the added value of medical review for the patient, and the mental and or physical state of the patient. The medical review is not an added value for all patients included in the TPCP. For example, if the patient does not use a lot of medication (at least two), if someone else like the GP already added or stopped medication or when the patient is not included in the TPCP the right time (very last phase of end of life), it can be disputed if it would be of added value when a pharmacist would visit the palliative patient. In that case, according to the interviews with two pharmacists, the medical review would probably have a stressful or burdening effect on the patient. Furthermore, the second reason concerns the mental and or physical state of the patient. According to the interviews with three pharmacists, most of the times the patient is too confused, sick, deceased or hospitalized before the medical review could have taken place. The patients, who did participate with the performed medical reviews, are often in a good condition. To confirm, the patient of the review the

researcher of this study attended, was in a good condition. Including palliative patients in an early stage is therefore critical according to the three pharmacists.

4.2 barriers and facilitators

4.2.1 Is the implementation process of the medical reviews successful, considering the criteria of Saunders (2005)? (Fidelity (quality), dose delivered (completeness), dose received (exposure), dose received (satisfaction), reach (participation rate), recruitment and context).

In paragraph 2.1.2 all concepts of question 4.2.1 are described comprehensively, in this paragraph only the definitions are repeated.

Fidelity (quality)

Fidelity (quality) was described as the extent to which an intervention was implemented as planned (Saunders, 2005). Before implementing the medical reviews, no general goals regarding the medical reviews existed to the knowledge of the three interviewed pharmacists. Moreover, according to the interviews with three pharmacists, the medical reviews have been added as intervention after the implementation of the former concept of the TPCP, because otherwise pharmacists would not be included. Furthermore, the three pharmacists do not have knowledge regarding an implementation plan. It must be mentioned; this is not broadly discussed during the interviews. This means it is hard to state if the medical reviews are implemented as planned or not. Although, when figure 2 of chapter 1 is considered, most steps are followed. It must be mentioned, some steps are not yet performed, as they should. This will be discussed in this paragraph under *recruitment*. Furthermore, goals set by the pharmacists mutually overlap each other. The goal that was mentioned by all pharmacists was the optimisation of medication use by the patients. If often happens that palliative patients use medication with a long-term effect, while patients won't outlive the long-term effect. Meaning that the time before the medication would work, the patient would already be deceased. Another example of optimizing medication can be adding pain-relieving and comforting medication, when a patient suffers side effects or has any pains. Furthermore, a second goal according to two pharmacists was improving the quality of life in the end of life phase so for example; does the patient receive sufficient analgesics. Next to those two goals, two pharmacists were of the opinion that improving the pharmacist-patient relationship was an important goal and or benefit.

Dose delivered (completeness)

Dose delivered (completeness) is described as 'the amount or number of intended units of each intervention or component delivered or provided by interventionists'. According to the interviews with three pharmacists, a protocol for the medical reviews for palliative patients was developed, which was based on the protocol for medical reviews for non-palliative patients (appendix 6). This protocol was spread among all participating pharmacists within the TPCP. Moreover, according to one

pharmacist, a training session was held to practice how to perform medical review for palliative patients. The way the protocol is used by the interviewed pharmacists differs. Two pharmacists use the protocol as a back up (just for checking whether something is forgotten), and one pharmacist uses the protocol as an assisting document (protocol is followed step by step during medical review). During the observation, the researcher of this study noticed that the pharmacist followed the several steps of the protocol, which can be found in appendix 6.

Dose received (exposure)

Dose received (exposure) is 'the extent to which participants actively engage with, interact with, are receptive to, and/or use materials or recommended resources; can include "initial use" and "continued use'. The protocol can be considered to be the 'recommended resource'. The three pharmacists do not have any knowledge regarding the use of the protocol during a medical review of their colleagues. It must be said, next to interviewed pharmacists, not many other medical reviews are performed. However, during the observation the protocol was adhered. Moreover, as mentioned before, the three pharmacists indicate that they use the protocol, both as back up and as assisting document.

Dose received (satisfaction)

Dose received (satisfaction) is 'participants (primary and secondary audiences) satisfaction with program, interactions with staff and/or investigators'. The two pharmacists, who did perform medical reviews, did not receive direct feedback from the GP. However, the pharmacists experience that patients are satisfied with the medical reviews. The two concerning pharmacists have no experience with dissatisfied palliative patients. The patients can always call or contact the pharmacists when they have questions or problems with their medication. According to the questionnaire, the medical was a clear and pleasant conversation and had sufficient added value for the patient.

"On the patients' peace of mind, it is very positive"

Reach (participation rate)

Reach (participation rate) is 'the proportion of the intended priority audience that participates in the intervention'. All three pharmacists agree that the target population concerns all the patients who are included in the TPCP. The patients are selected because the general practitioner is of the opinion that their life expectancy is less than a year. However, not all patients included in the TPCP participate with the medical review, because not all patients are in a sufficient condition to participate with the medical review. Moreover, according to the interviews with two pharmacists the role they play in the TPCP is also new for the GPs. It is not in their routine to include patients in the TPCP; this is expected to grow among the GPs participating with the TPCP. In addition, next to the missing

routine, according to one pharmacist the GP does not always sees the added value of the medical review for the concerning patient.

Recruitment

Recruitment is 'procedures used to approach and attract participants at individual or organizational levels'. The GP selects patients, which he or she thinks have a life expectancy less than a year. Subsequently, the pharmacists receive an application form from the GP. However, the step regarding the application form is sometimes forgotten by the GPs, which means the pharmacists receive the forms via a detour; the multidisciplinary consultation (MDC), which is a consultation once a week between different healthcare professionals where the palliative patients of the TPCP are discussed. When selecting patients for the TPCP, the GP has to inform the patient that after a few weeks the pharmacist will contact the patient. However, according to two pharmacists, the patient is not always informed. At the same moment, the GP must report the patient to the MDC. Moreover, this application form is not always complete regarding the pre-arranged information provisioning. After receiving the application form, the pharmacists agreed with the GPs to wait at least three weeks, before contacting the patients, so that the patients are firstly discussed at the MDC.

"*We, as pharmacists, are not involved in including patients for the TPCP*"

Context

The *context* is 'aspects of the environment that may influence intervention implementation or study outcomes' (Saunders, 2005). This concept shows a strong overlap with the barriers and facilitators mentioned in paragraph 4.2.2, which is why it is discussed in the next paragraph.

Table 2: results criteria of Saunders (2005)

Criteria of Saunders (2005)	Results
Fidelity (quality)	No implementation plan or goals. Hard to find out if the medical review is implemented as planned.
Dose delivered (completeness)	Protocol for medical reviews exists (which was followed during observation). Method of using protocol differs between pharmacists.
Dose received (exposure)	During the observation the several steps of the protocol (appendix 6) were adhered.
Dose received (satisfaction)	Pharmacists experience that patients have a good feeling with the medical reviews.
Reach (participation rate)	Target population concerns all patients included for the TPCP. However, not all patients included for the TPCP participate with the medical reviews.
Recruitment	GP selects palliative patients for the TPCP. GP has to inform the pharmacists, after which the pharmacist will contact the patient.
Context	Barriers and facilitators (paragraph 4.2.2)

4.2.2 What are the barriers and facilitators for the implementation of the medical review?

Barriers for implementation

The first two barriers are already discussed in paragraph 4.1.5, because the two barriers are also reasons why not all the patients of the Transmural Palliative Care Pathway participate in the medical review of the Transmural Palliative Care Pathway. In this paragraph the barriers will be discussed once again. The first barrier, according to the interviews with three pharmacists, concerns the added value of the medical review for the palliative patients. The medical review is not an added value for all patients included in the TPCP. For example, if the patient does not use a lot of medication (at least two), if someone else like the GP already added or stopped medication or when the patient is not included in the TPCP the right time (very last phase of end of life), it can be disputed if it would be of added value when a pharmacist would visit the palliative patient. In that case, according to the interviews with two pharmacists, the medical review would probably have a stressful or burdening effect on the patient.

The second barrier concerns the mental and or physical state of the patient. According to the interviews with three pharmacists, most of the times the patient is too confused, sick, deceased or hospitalized before the medical review could have taken place. The patients, who did participate with the performed medical reviews, are often in a good condition. To confirm, the patient of the review the

researcher of this study attended, was in a good condition. Including palliative patients in an early stage is therefore critical according to the three pharmacists.

"*Patients are often already dying or admitted to a hospice, and then I cannot do anything anymore*"

The third barrier for the implementation of medical reviews is that the medical review is confronting for both patients and pharmacists. According to the interviews with two pharmacists it confronts patients with death, which is not a subject palliative patients like talking about. Moreover, the medical review is according to one pharmacist also confronting for the pharmacists themselves. Pharmacists are not used to visit patients who are in their end of life phase. However, because pharmacists also perform 'normal' medical reviews, the planning of medical reviews for palliative patients cannot be seen as a barrier; it fits within their daily routine.

"*As a pharmacist we are not used to visit to patients who are in a bad condition*"

A fourth barrier according to one pharmacist could be due to the number of the participating GPs. Because the pharmacists are linked to their own general practice, the pharmacists won't receive any patients when the GPs are not participating with the TPCP. To give an indication, more than half of the general practices in Geleen are not participating with the TPCP. Which means not all palliative patients in Geleen are included in the TPCP, and thus appointed for the medical reviews.

"*In fact, every GP should be involved and every pharmacist should be involved*"

Facilitators for implementation

A facilitator for the implementation of the medical review for palliative patients could be the reimbursement. According to the interview with one pharmacist, at the moment there are two possibilities for reimbursement. The first possibility is that the patients used their entire own risk regarding healthcare, so no extra payment has to be made by the patient, or when the patient has no objection for paying the medical review. The second possibility would occur when a patient did not yet use his or her own risk, the patient does not want to pay for the medical review or the patient would not be eligible for the medical review; then the health insurer would pay for the medical review. This means that there will be no charges for the patient. The paying health insurer instead of the patient can be seen as a facilitator. However, this process regarding the reimbursement of the medical review is not completely clear for the two other pharmacists. According to one pharmacist, because the reimbursement is not clear, the medical review is not declared at all. This means that no one pays for the medical review. According to the interview with another pharmacist, the medical reviews are

declared together with 'normal' medical reviews (detour). Consequently, the health insurer does not know how many medical reviews with palliative patients are performed.

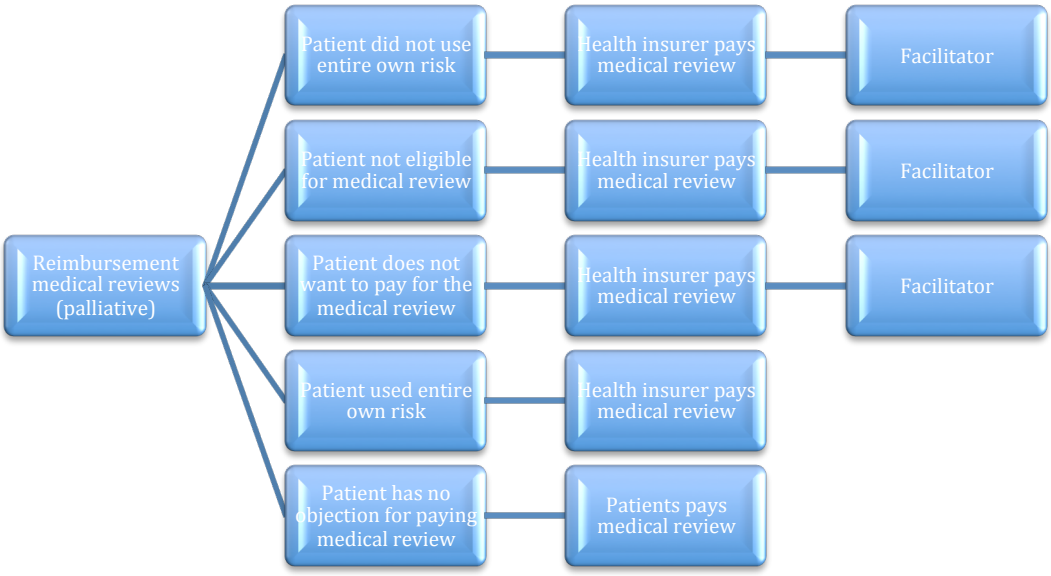

Figure 4: Reimbursement process medical review (palliative)

The MDC, the consultation between several healthcare-professionals, including at least one pharmacist, were the palliative patients included in the TPCP are discussed, could be seen as another facilitator for the implementation of the medical review within the TPCP. The reason for this concerns the back-up check regarding the application form. If during the MDC it becomes clear the concerning pharmacist is not yet informed by the GP, the pharmacist will be informed that his or her patient is included in the TPCP, after which the pharmacist can contact the concerned patient according to the interview with one pharmacist. Moreover, the pharmacist receives feedback/ information regarding his or her patients after the MDC. This information can help the pharmacist to optimize the medical review with the patient. In addition, the pharmacist, who can be seen as the linking person between the project group, MDC, and pharmacists, is considered to be a facilitator as well. This can be seen as a facilitator because the linking person informs pharmacists when his or her concerning patient is discussed at the MDC, and informs the pharmacist when his or her concerning patient included in the TPCP, if this has not yet been done by the concerning GP.

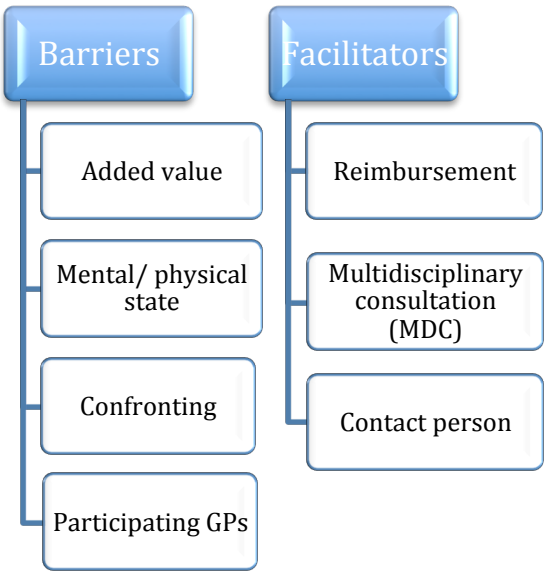

Figure 5: Barriers and facilitators medical review (TPCP)

4.2.3 Characteristics Grol (2013)

Table 3: Results characteristics Grol

Characteristics Grol (2013)	Results
Benefit	○ Better relationship patient-pharmacist (advantage). ○ Optimization medication (goal). ○ Optimization Quality of Life (goal).
Compatibility	○ Fits within daily routine pharmacist (also perform normal reviews). ○ Not all GPs/ pharmacists participate with the TPCP (according to one pharmacist they don't recognize the added value).
Complexity	○ Reimbursement is a complex process. However this can be seen as a facilitator (health insurer pays). ○ Not all patients of the TPCP participate with medical review. However, pharmacists believe medical review fits well in the TPCP (important role pharmacist). ○ Medical review itself not complex (similar to 'normal' medical reviews). However, medical reviews are part of the complex TPCP.
Triability	○ The TPCP, and thus the medical reviews, are still in its pilot phase.
Visibility	○ Not many medical reviews performed; low visibility. Hard to recognize results because patients do not live long once included in the TPCP. Added value medical review not always clear (subjectivity in opinion pharmacists/ GPs).

4.2.4 Characteristics Greenhalgh (2004)

Table 4: Results characteristics Grol

Characteristics Greenhalgh (2004)	**Results**
Reinvention	○ Pharmacists can schedule the review themselves (fits in pharmacists' planning). ○ Pharmacists can make agreements with GPs regarding the process and follow-up steps.
Fuzzy Boundaries	○ Medical reviews are flexible; take place at the patients' home, and not at the pharmacy.
Risk	○ Outcomes medical reviews not clear so far (high risk). ○ Patients do not have to pay for medical review if they do not want to pay; in that case the health insurer pays for the medical review (low risk). ○ Medical reviews could be confronting for patients, it confronts patients with death (high risk).
Task issues	○ Medical review highly relevant for pharmacists, because they also perform 'normal' medical reviews. ○ Not all GPs of Geleen recognize relevancy medical review; they are not part of the TPCP.
Knowledge required to use it	○ Pharmacists also perform 'normal' medical reviews (low extra knowledge required to use it). However, extra knowledge regarding palliative care and how to comfort palliative patients may be recommendable.
Augmentation/ support	o Protocol exists for the medical review, based on protocol 'normal' medical review. However, this protocol is adapted so it is usable for palliative medical review and palliative patients. ○ Medical review is supported by MDC.

5. Discussion

The main findings of this study are presented in paragraph 5.1. Furthermore, in paragraph 5.2 the strengths and weaknesses are discussed. Paragraph 5.3 describes the recommendations as a result of this study. And finally, an overall conclusion of this study will be presented in paragraph 5.4.

5.1 Main findings

Overall, the three pharmacists are of the opinion that the medical review has not yet fully come to fruition, since certain aspects like the GP-pharmacist communication needs to be improved. However, they regard the current situation as a good start, with the possibility of further growth and implementation, which will be elaborated upon further in this chapter. The main research question of this study was "*What are the effects of a medical review performed by a pharmacist in palliative care in the Westelijke Mijnstreek, and what are the barriers and facilitators for implementation?"* Firstly, the main findings regarding the effects will be discussed (paragraph 5.1.1). Secondly, the main findings respectively to the barriers and facilitators will be discussed (paragraph 5.1.2).

5.1.1 Effects medical review

The main benefit of the medical review according to the pharmacists is the improved pharmacist-patients relationship. After the medical review the patient contacts the pharmacist more quickly with questions regarding his or her medication use. The two main goals of the medical review are the optimization of medication use, and optimization of quality of life. According to the KNMP (2017) and Kwint (2014) a medical (normal) review should result in an optimization of the medication use, which is in line with the goal mentioned above. Another goal mentioned in correlation with 'normal' medical reviews is the reducing of hospitalizations of patients as a result of medication use (Reynders, 2013), which is not mentioned in this study. Furthermore, the results show that the medication prescription differs comprehensively between patients; sometimes medication is stopped, and sometimes medication is even added. According to another study, in 81% of the cases certain medications were stopped after the medical review with elderly who suffer multimorbidity (Reynders, 2013). Whether the goals mentioned in this paragraph are reached is difficult to validate with this study. A reason for this concerns the low visibility of results regarding the medical reviews. Few medical reviews are performed and patients often decease quickly after the medical review to get results from. Further research is needed to uncover if the medical optimizes the medication use and quality of life. However, it must be mentioned that the medical reviews and the TPCP are still in its pilot phase. In addition, according to the results of this study the medical review did discuss all subjects important for the patient, and the right amount of information was provided. Furthermore, the medical review had sufficient added value for the patient. Moreover, as a result of the medical review the patient had fewer uncertainties regarding medication use, which is in line Reynders (2013); because medical (normal) reviews should provide sufficient information regarding the medication use, which probably decreases uncertainty. However, the pharmacists often perceive that palliative patients

have little uncertainties about their medication use. Furthermore, the medical reviews for palliative patients are quite compatible with the daily routines of the pharmacists, because pharmacists also perform 'normal' medical reviews. According to Kwint (2014), 85% of all Dutch pharmacists perform medical reviews every year. Moreover, pharmacists have the opportunity to schedule the reviews themselves (own agenda), and they take place at the patients' location, which means no rooms at the pharmacy have to be made available. On the other hand, not all the GPs/ pharmacists participate with the medical review, which makes the compatibility of the medical review questionable because pharmacists who did not participate with the medical reviews were excluded for this study.

5.1.2 Barriers and facilitators medical review

It is hard to determine if the implementation of the medical reviews is successful or not. The following concepts by Saunders (2005) refute the successful and unsuccessful factors for the medical review with palliative patients. Looking at the results, it is still not clear whether the medical reviews were implemented as planned (fidelity), because implementation plans did not exist prior to the implementation of the medical review, according to the three pharmacists. Reasons for none implementation plans could be that the medical reviews were added to the TPCP in a later stage. Although, according to research implementation plans are rather important for innovations (Salegna, 1996). A protocol for the medical review exists which was based on the protocol of the 'normal' medical review. This protocol is based on the 'Strip' (Systematic Tool to Reduce Inappropriate Prescribing) method (Reynders, 2013). The interviewed pharmacists use the protocol as a back up or as guidance, as explained in the paragraph 4.2.1 (dose delivered (completeness) & dose received exposure). Regarding patient satisfaction (dose received), the results seem positive. The pharmacists only have good experiences with patients after the medical review and according to the questionnaire the patient did experience the medical review as pleasant. This study is one of the first ones where patient satisfaction with the medical reviews (especially with palliative patients) is examined. The target group of the medical review concerns all patients included in the TPCP (life expectancy less than one year). However, not all patients of the TPCP participate with the medical review (reach) for which the main barriers will be elaborated upon further in this paragraph. Furthermore, the recruitment of patients is far from perfect. Pharmacists are not always informed that their patient is included in the TPCP, and when the pharmacists are informed; information about the patients is not always complete. Nevertheless, according to the KNMP (2017) it is important that the GPs and pharmacists make clear agreements about cooperation and division of tasks. In addition, good collaboration between pharmacists and GPs is a boundary condition for 'normal' medical reviews, especially with elderly (Reynders, 2013). Moreover, the GP does not always inform the patient that the pharmacist will contact the patient once included in the TPCP. However, for the patient, it must be clear that the medical review (normal)(and TPCP) is a cooperation between GP and pharmacist (KNMP, 2017).

This study shows that there are four barriers for the implementation of the medical review within the TPCP. Two of those four barriers also account for the reason why not all patients included in the TPCP project participate with the medical reviews. Those two barriers are the added value for the patient and the mental and physical state of the patient. As explained in the results some patients do not benefit participating with the medical review; the review would probably have a negative effect on the patient. In addition, the IGZ recommends medical reviews (normal) to elderly (older than 65 years) patients who use more than seven medications (KNMP, 2017). This means that for palliative patients with two medications the added value of the medical review is questionable. Furthermore, the palliative patients included in the TPCP are often deceased, hospitalized, too sick or too confused to participate with the medical review. Moreover, terminal patients may show less interest in people around them (Leenaarts, 2016), so probably the palliative patients will also have less interest in pharmacists they never have seen before. However, according to one pharmacist it is still recommendable to let a pharmacist check the medication use when a patient is too confused for a conversation, even without the medical review. The other two barriers concern the number of participating GPs, and the confrontment of the medical review itself. At the moment less than 50% of the GPs in Geleen are participating with the TPCP project. Because the pharmacists are linked to their GPs, pharmacists who are linked to GPs who do not participate with the TPCP project do not receive any palliative patients. Furthermore, another barrier for the implementation of the medical review is that the medical review is confronting for both patients and pharmacists. Palliativezorg (2017) confirms that palliative care is indeed confronting for patients, but also for healthcare professionals. So it may be possible that pharmacists do not schedule medical reviews because they experience the medical review as too confronting, and probably the same for the palliative patients.

The three facilitators for implementation of the medical reviews concern the reimbursement, the contact person and the MDC. The reimbursement of the medical review can be assumed as a facilitator because the palliative patients do not have to pay for the medical review if they do not agree with paying for the medical review; the health insurer pays. According to the KNMP (2014), good collaboration between healthcare professionals and health insurers improves the processes of the implementation. The second facilitator regards the Multidisciplinary Consultation (MDC) between several healthcare professionals where the palliative patients are discussed. Sometimes the GP forgets to contact the pharmacist when his or her patient is included for the TPCP. When this happens the MDC contacts the pharmacist, after which the pharmacist can contact the patient for the medical review. Moreover, the MDC provides the pharmacist with input for the medical review. In addition, the linking person mentioned in paragraph 4.2.2 can also be seen as a facilitator. This contact person is the link between the participating pharmacists and the MDC.

5.2 Strengths and weaknesses of the study

This study provides insights into the effects of the medical review within the Transmural Palliative Care Pathway. Furthermore, this study revealed several barriers and facilitators for implementation of the medical reviews. One of the strengths of this study is the use of the mixed method approach. Both qualitative (interviews and observations) methods and a quantitative method (questionnaire) were used. Subsequently, the maximum amount of data relevant for this study was collected. Another strength are the high response rates for both the interviews (3/3) and the questionnaire (1/1). However, because the results include only one questionnaire, the value of the questionnaire is low because it is the opinion of one person. Furthermore, the use of the different theories (chapter 2) of Grol (2013), Greenhalgh (2004) and Saunders (2005) for developing data collection methods (topic list interview, observational document and questionnaire) and for analysing the data collected for this study (appendix 7; coding scheme) strengthens this study. It results in a higher construct validity and reliability. Moreover, the content validity of this study was improved by letting two experts – an epidemiologist, and a pharmacist - criticize the accuracy of the content topic list, survey and methods of the study.

This study is limited firstly by selection bias. Selection bias is the result of not selecting pharmacists for the interviews randomly. Pharmacists with the most knowledge regarding the medical review for palliative patients, and pharmacists who did perform a medical review with palliative patients prior to this study were included. In addition, this means that one pharmacist did not perform any medical reviews with palliative patients prior to this study. The selection bias results in a decreased internal validity. In addition, because only three pharmacists were included for this study, six other pharmacists who are also involved in the TPCP were not included. The six other pharmacists did not yet perform a medical review with palliative patients prior to this study. This could lead to biased or distorted results.

During the research period of this study, only one medical review with a palliative patient was performed. This resulted in one observation and one completed questionnaire included in the results for this study. With only one observation and one questionnaire it is hard to validate the results. Moreover, this study has a low external validity because research was performed within the boundaries of the TPCP project, meaning that the results are not directly applicable for medical reviews with palliative patients other than the TPCP project medical reviews. However, the results of this study can be used as a guideline or example of the effects of medical reviews for palliative patients in general, and the barriers and facilitators of implementation. Furthermore, because the GPs were not included in this study, information regarding the including process of palliative patients for the TPCP is missing. Finally, three different methods for the data collection of this study were used. The use of three different methods complicates the data collection and data analysing process because

for all three methods data was collected and analysed in a different way, which makes it hard to replicate this study in the future.

5.3 Recommendations

Including patients in an earlier stage

Palliative patients are often in a late stage included in the Transmural Palliative Care Pathway. Patients are often deceased, hospitalized, too sick or too confused to participate with the medical review. Although, especially for the medical review it is important patients are included for the TPCP in an early stage. So maybe it is recommendable to include patients for example with the age above 80, because patients above 80 often use a lot of medication. Other criteria than age are also applicable, like for instance the disease dementia. According to the KNMP (2017), the IGZ (inspection for healthcare) norms for inclusion in the 'normal' medical reviews are: age 75 or older, 7 or more medications and having a bad functioning kidney. However, when using those criteria not all patients will be palliative. Although, according two pharmacists it is never wrong to let a pharmacist check the medication use of patients who use several medications, to possibly optimize medication use or just to make contact with the patients to improve the patient-pharmacist relationship. Even when the patient is not capable to participate with the medical review, it may be helpful letting the pharmacist check and analyse the medication use.

Another way of including patients in an earlier stage may be the optimization of the including process by the GP. Including patients for the TPCP is a new role for the GPs, which means they need to get used to including patients in the TPCP. By training or habituation of the GPs it may be possible for GPs to get more experience regarding the inclusion of patients in the TPCP. This may eventually result in including palliative patients in an earlier stage, informing the patients regarding the pharmacists' role, and providing the pharmacists with more complete information. However, including patients in the TPCP will always be a sensitive topic, because GPs do not like taking away the patients' hope. Which means including patients in the TPCP one year before their death will always be hard to achieve.

Medical review prior to MDC

Currently, the pharmacists contact the palliative patients for making an appointment for the medical review after the patient is discussed at the MDC (multidisciplinary consultation). The patient is firstly discussed at the MDC because subsequently the pharmacist has more input during the medical itself. When the medical review would be planned prior to the MDC yields two benefits, namely: the pharmacists do not have to wait before the patients are discussed at the MDC, so the medical review can take place in an earlier stage. Second, if the medical review would take place prior to the MDC, the pharmacist can forward his or her advice to the MDC. Consequently, follow-up steps for the patients can be discussed at the MDC between the concerned GP and several healthcare

professionals. However, when planning the medical review before the MDC the pharmacist has less input for the conversation because the information of the MDC is missing.

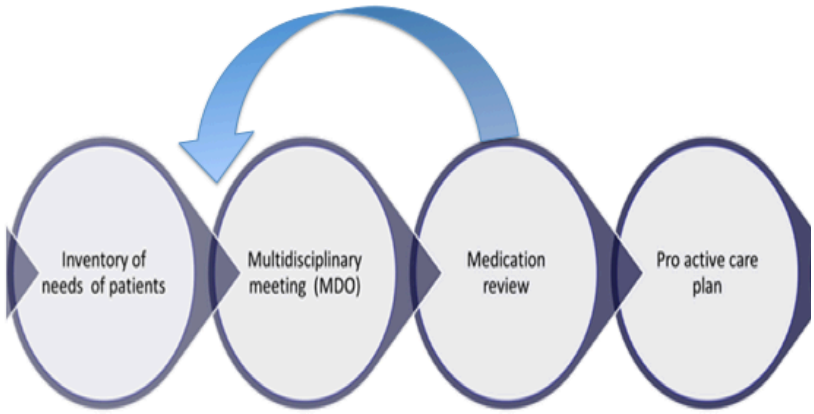

Figure 6: TPCP, medical review prior to MDC (MDO)

Further implementation

Before considering any further implementation of the medical review within the TPCP project, it is important to first optimize the project internally, which means a number of current issues need to be improved within to group of healthcare professionals participating with the TPCP. One issue concerns the process between the GPs and pharmacists. According to other research, closer cooperation between GPs and pharmacists improves the implementation of the medical (normal) reviews (KNMP, 2017). It is important that the GP informs the pharmacist if his or her patient is included in the TPCP. This does not always happen, which results in a delayed procedure. Moreover, the information the GP provides is not always complete. For instance, according to a pharmacist information regarding the date of inclusion is often missing. Consequently, the pharmacist does not know when the patient is included, and thus does not know when to contact the patient. Although, this information is rather important because the GPs and pharmacists agreed that the pharmacist had to wait at least 3 or 4 weeks before contacting the concerning patient. A registration form already exists for palliative patients. However, if the GPs do not fill in this form completely and correctly, the pharmacists still miss information. According to the interviews with two pharmacists it is also a bit of experience that has to grow among the participating GPs and pharmacists, because talking with patients over the end of life phase is quite new for those two professions. Another study stated that it is indeed quite difficult for doctors figuring out whether a patient is palliative or terminal ill (Heyse-Moore, 1987). According to one pharmacist, in past the subject of death was not discussed much.

When implementing the project further, it is recommendable that the new participating pharmacists get trained regarding the medical review for palliative patients. This way they know how to perform a medical review with palliative patients, which decreases the threshold to perform those medical reviews with palliative patients. Moreover, it may be recommendable for participating

pharmacists to start a workgroup to discuss the process of the medical review every five or six months. This will probably result in more experience among all pharmacists and an improved process.

Further research

Including GPs in further research, to discover the exact process of including patients in the TPCP, how they include patients and which procedure they use, is recommendable. For this study only pharmacists were included, which are not involved in including patients in the TPCP. Consequently, results regarding the including process of palliative patients for the TPCP are currently missing.

This study has a time span of three months. For further research it is recommendable to expand this research period. The period of three months for this subject is rather short because not a lot of medical reviews take place, which did result in few observations and questionnaires. When the period is expanded more observations can be done and more questionnaires can be handed out, which will result in a higher validity and more results. Moreover, it is recommendable for pharmacists or GPs to keep track of medication changes as a result of the medical review. Consequently, effects regarding change in medication use as a result of the medical review can be unravelled in future research. In addition, the same can apply for patient satisfaction, uncertainty changes regarding medication use et cetera (paragraph 4.1).

5.4 Conclusion

It is noticeable that the TPCP project, and thus the medical review, is still in its pilot phase. Before implementing the medical reviews for palliative patients any further, for instance by including more GPs and pharmacists, the medical reviews first have to be optimized within the group who are included at the moment. Moreover, the barriers for implementation need to be taken into account. However, the effects of the medical review seem to be overall positive, so further implementation in the future is recommendable.

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Appendix

Appendix 1: Likert scale questionnaire (in Dutch)

Geef achter elke uitspraak aan in welke mate u het daarmee eens of oneens bent.	**Sterk mee eens**	**Mee eens**	**Mee oneens**	**Sterk mee oneens**
Vraag 1 – Het gesprek met de apotheker heeft voldoende meerwaarde gehad voor u.	1	2	3	4
Vraag 2 – Alle onderwerpen die u graag wilde bespreken met de apotheker zijn aan bod gekomen.	1	2	3	4
Vraag 3 – De onderwerpen die u met de apotheker heeft besproken bevatte de juiste hoeveelheid informatie voor u.	1	2	3	4
Vraag 4 – Het gesprek heeft ervoor gezorgd dat u minder onzekerheden heeft betreffende uw medicatie gebruik.	1	2	3	4
Vraag 5 – U krijgt minder medicatie voorgeschreven na het gesprek met de apotheker.	1	2	3	4
Vraag 6 – U krijgt een andere combinatie van medicatie voorgeschreven na het gesprek met de apotheker.	1	2	3	4
Vraag 7 – Het gesprek is op het juiste moment gepland.	1	2	3	4
Vraag 8 – U had graag nog bepaalde onderwerpen willen bespreken die niet aan bod zijn gekomen.	1	2	3	4

Zo ja; welke?	
Vraag 9– Heeft u verder nog opmerkingen over het gesprek? Bijvoorbeeld wat u fijn en minder fijn vond.	

Appendix 2: Topic list interviews (in Dutch)

Voorstellen

- Interviewer stelt zich voor en geeft reden waarom hij met de apotheker een interview heeft gepland (omdat deze 2 apothekers al 2 of meer medicatie (palliatief) reviews hebben uitgevoerd).
- Duidelijk het doel van het onderzoek uitleggen (het doel van het onderzoek is om erachter te komen wat de effecten van de medicatie (palliatief) review zijn, en de barrières voor de implementatie hiervan)
- Het interview zal ongeveer een uur duren en ik zal vragen stellen over de medicatie review, de patiënten die deelnemen, de effecten en de barrières voor implementatie.
- Informed consent tekenen, vragen om op te nemen, en anonimiteit benadrukken.
- De apotheker stelt zich voor, rol betreffende de medicatie reviews

Medicatie review

- Wat is de doelgroep voor de medicatie review? Belangrijke punten specifiek van deze doelgroep?
- Wat is in uw ogen het doel (reden) van de medicatie review? Zijn er vanuit het Zorgpad vooraf doelen opgesteld?
- Wat zijn volgens u de grootste voordelen van zo'n medicatie review (resultaten)?
- Heeft de medicatie review ook nadelen?
- Wat zijn de onderdelen van de review/ wat wordt er besproken (protocol)?
- In uw kennis, wordt het protocol altijd gevolgd door andere apothekers/ huisartsen? En door u?
- Hoeveel reviews heeft u op het moment gehad? Wanneer vonden deze plaats (ver/ vlak voor overlijden)?
- Wat is in uw ogen de grootste meerwaarde van de review?

Patiënten medicatie review

- Net al deels de doelgroep besproken; hoe worden patiënten binnen gehaald? Richtlijn (target population) aantal patiënten? Zo ja, wordt deze richtlijn behaald?
- Worden patiënten van te voren ingelicht/ voorbereid betreffende de medicatie review?
- Hebben de patiënten veel onzekerheden over hun medicatie gebruik?
- Er is vaak een verandering/ vermindering in medicatie gebruikt van de patiënten na de medicatie review? Wanneer wel/ niet?

- Wat is de ervaring patiënt/ familie met de medicatie review→ nuttig/ niet nuttig/ tevreden/ niet tevreden? En hoe weet u dit?

Mogelijke barrières

- Wat zijn de grootste barrières van de medicatie review?
- Ik heb begrepen dat niet alle patiënten van het Zorgpad deelnemen aan de medicatie review; wat is hier de grootste reden voor? Wordt u tijdig op de hoogte gesteld door de huisarts? Hoe verloopt dit proces en hou zou dit volgens u moeten lopen?
- Past de review in het dagelijkse werkzaamheden van apotheker/ huisartsen?
- Sluit de medicatie review op een juiste manier aan bij het Zorgpad?
- Kan het gezien worden als een pilot? → denkt u dat een verdere implementatie van de medicatie reviews mogelijk zijn in de toekomst? Heeft u hier advies voor (barrières tegengaan)?
- Genoeg patiënten van de huisarts?/ uitnodigingsprocedure → flexibiliteit (reinvention)
- Hoe werkt de vergoeding/ eigen bijdrage van de medicatie review voor de patiënten? Kan dit worden gezien als een barrière?

Wat vond u van het interview? Heeft u nog tips voor mij?

Appendix 3: Observation document (in Dutch)

Vooraf aan het gesprek vraagt de observant toestemming om te observeren aan zowel de apotheker, als aan de patiënt en de informele zorgverlener die waarschijnlijk ook aanwezig zal zijn. De patiënt wordt gevraagd een informed consent document te tekenen

Protocol (Tijdens de observatie, checkt de observant of het protocol doorlopen is, of de informatie volledig begrepen is, en begrepen word ten algemene houding van alle aanwezige partijen).

GESPREK MET DE PATIENT (medicatie/ palliatieve review protocol)

Voer het gesprek met gebruikmaking van de gesprekshulp:

Gegevens van de patiënt, mantelzorger, thuiszorg/ verzorging en de hoofdbehandelaar worden genoteerd.

Patiënt

Diagnose / wat is er al door de arts verteld?

Hoe gaat het met de patiënt/kwaliteit van leven:

Vragen van patiënt / problemen:

Medicatie

Medicatie historie (bijzonderheden evt. aangeven bij medicatieoverzicht)

Andere (genees)middelen (aangeven op medicatie overzicht)

Problemen bij medicatiegebruik?

Klachten/ wensen/ vervolgtraject

Klachten worden genoteerd (welke klachten, wanneer, hoe vaak)

Wensen/ prioriteiten patiënt worden besproken

Vervolgtraject wordt toegelicht:

1. Gesprek apotheker – arts
2. Terugkoppeling van de resultaten aan de patiënt door apotheker en/of arts
3. Als situatie wijzigt of als er verdere vragen zijn kan de patiënt contact opnemen met de apotheker

Krijgt de patiënt de ruimte om zijn volledige verhaal te doen?

Krijgt de participant de kans om wat te zeggen, of is vooral de apotheker aan het woord?
Krijgt de participant de gelegenheid om vragen te stellen?
Vraagt de apotheker door?

Lijkt de patiënt te begrijpen wat hem/ haar verteld wordt?

Knikt de participant?
Heeft de participant vragen?
Checkt de apotheker of de participant hem/ haar begrijpt?

Wat is de houding van de patiënt (en familie/ informele zorgverlener patiënt)?

Gesloten of open houding (bijvoorbeeld armen over elkaar or voorover leunend)?
Oogcontact?
Open/ afstandelijke houding?

Wat is de houding van de apotheker?

Gesloten of open houding (bijvoorbeeld armen over elkaar or voorover leunend)?
Oogcontact?
Open/ afstandelijke houding?

Opvallende bevindingen/ opmerkingen van de observant.

Appendix 4: Informed consent observation (in Dutch)

Beste heer/ mevrouw,

Voor mijn studie aan de Universiteit van Maastricht (UM) doe ik onderzoek naar het gesprek tussen apothekers en patiënten die bepaalde medicatie middelen gebruiken.
Voor het onderzoek voer ik observaties van het gesprek tussen apotheker en patiënt uit. Hiervoor zal ik een aantal bevindingen noteren die mij opvallen tijdens dit gesprek. Bijvoorbeeld of de apotheker genoeg informatie verschaft, of het protocol door de apotheker wordt nageleefd, en of een patiënt de ruimte krijgt om vragen te stellen. Verder zult u achteraf gevraagd worden een korte vragenlijst in te vullen.

De door mij genoteerde en ontvangen gegevens zullen strikt anoniem worden gebruikt voor mijn van het onderzoek.

Hartelijk bedankt voor uw medewerking, vriendelijke groet,

Christian Hanouwer
Masterstudent, Universiteit Maastricht

In te vullen door de deelnemer

Ik verklaar op een voor mij duidelijke wijze te zijn ingelicht over de aard van het onderzoek. Ik weet dat de gegevens en resultaten van het onderzoek alleen anoniem en vertrouwelijk aan derden bekend gemaakt zullen worden. Mijn vragen zijn naar tevredenheid beantwoord.

Ik stem geheel vrijwillig in met deelname aan dit onderzoek.

Naam deelnemer: ……..

Datum: …… Handtekening deelnemer: …..…….

☐ Graag aan vinken als u geïnteresseerd bent om het eind resultaat van het onderzoek te ontvangen per mail

Email adres : ……...

Appendix 5: Checklist medical review, palliative (in Dutch)

Checklist voor uitvoeren palliatieve review

VERZAMELEN VAN GEGEVENS

□ Aanmelding MDO is ontvangen
□ Medicatiehistorie/porsiogram van laatste 12 maanden uitgedraaid

GESPREK MET DE PATIENT

□ Voer het gesprek met gebruikmaking van de gesprekshulp

FARMACEUTISCHE ANALYSE

□ Geneesmiddelgerelateerde problemen in kaart gebracht en geprioriteerd
□ Mogelijke interventies benoemd

OVERLEG APOTHEKER-ARTS

□ Farmaceutische analyse besproken met arts
□ Interventies bepaald

TERUGKOPPELING NAAR PATIENT

Wie voert terugkoppeling uit naar patiënt?
□ arts
□ apotheker

VASTLEGGING ACTIES

Volgende interventies zijn afgesproken

Datum:

Afgesproken interventies:

Leg deze checklist vast in het dossier van de patiënt

Appendix 6: Protocol/ conversation support medical review (in Dutch)

Gesprekshulp palliatieve review (versie 070616)	Datum afname:

Patientgegevens: Geb.datum:

Hoofdbehandelaar:

Mantelzorger (1e contactpersoon + gegevens):

Thuiszorg/verzorging (+ evt contactpersoon):

☐ Diagnose / wat is er al door de arts verteld?

☐ Hoe gaat het met de patiënt/kwaliteit van leven:

☐ Vragen van patiënt / problemen:

☐ Medicatie historie (bijzonderheden evt aangeven bij medicatieoverzicht)

☐ Andere (genees)middelen (aangeven op medicatie overzicht)

☐ Problemen bij medicatiegebruik?

Klachten:

☐ Vallen, duizeligheid

☐ Vermoeidheid, slaapstoornissen

☐ Stemming, somber, angst, verdriet, eenzaamheid

☐ Pijn, adequate pijnstilling aanwezig

☐ Stoelgang (laxantia nodig?)

☐ Jeuk

☐ Voedingstoestand, maagklachten, misselijkheid, problemen met eten of in mondholte

☐ Kortademigheid

☐ Incontinentie (voldoet het materiaal als dit al gebruikt wordt?)

☐ Overige klachten:

Klacht	Wanneer, sinds wanneer	hoe vaak

☐ Wensen en prioriteiten van de patiënt

☐ Vervolgtraject toegelicht:

1. Gesprek apotheker-arts
2. Terugkoppeling van de resultaten aan de patiënt door apotheker en/of arts
3. Als situatie wijzigt of als er verdere vragen zijn kan de patiënt contact opnemen met de apotheker

Appendix 7: Coding scheme

Open coding

The interviews consist of a number of topics. Those topics can be found in the transcript, in a fragmented way. All the different topics are referred to a code, which means that fragments that belong to the same topic receive the same code; and the fragments that belong to another topic receive another code. For the open coding process, a data matrix is used

Axial coding

Should the topics used for the open coding be connected? (Or disconnected)

Selective coding

What are the connections between the different topics? What is the main topic? How is this related to literature?

Table 5: coding scheme

Topic	**Code fragments + conclusion**
Target population palliative review	- -
Goal palliative review	- -
Advantages palliative review (effects)	- -
Disadvantages palliative review (effects)	- -
Protocol palliative review	- -
Timeliness palliative review	- -
Selecting patients for Zorgpad/ palliative review	- -
Process GP-pharmacist-patient	- -
Barriers palliative review	- -
Further implementation Zorgpad/ palliative review	- -
Reimbursement palliative review	- -
Patient/ family/ informal caregiver experiences	- -
Medication use/ prescription	- -
Burdening pharmacists	- -

Further notifications: