Evaluation study on the societal impact of knowledge vouchers on healthcare practices

ZonMw

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Executive summary

Background

Multidisciplinary and domain-transcending collaboration is necessary to preserve the high quality of primary care in the Netherlands. The programme “Op één lijn” (OEL) of ZonMw was established to stimulate this collaboration in the sectors prevention, care and social care. Although promising projects were started in this programme, the impact of the programme was less than expected. Therefore, ZonMw established the knowledge voucher to increase the impact of the programme.

Twenty projects of the programme OEL were selected as best practices. Healthcare organisations could apply for a best practice to implement at their own location. To support this implementation, a knowledge voucher was offered that consisted of 10,000 Euro. This budget could only be spent on the advisor of the best practice. 51 knowledge vouchers were granted.

An initial evaluation of the knowledge vouchers revealed that the vouchers were perceived as useful. Nonetheless, the societal impact of the knowledge vouchers on the participating practices could not be assessed because many projects were still running at the time of the evaluation. Therefore, the objective of this study was to make recommendations to ZonMw on how to improve the knowledge vouchers by evaluating the societal impact of the vouchers on the participating practices.

Measuring societal impact is challenging because of the lack of indicators to measure impact, the attribution problem and the temporality problem. The SIAMPI approach attempts to overcome these problems by focussing on the productive interactions that serve as indicators for societal impact, which include direct interactions, indirect interactions and financial interactions. ZonMw has adjusted the SIAMPI model to concretise the interactions. The model ZonMw uses is called the MKB model, which consists of four interactions: dissemination and application activities, products, collaboration, and financing. The MKB model is used in this study. The interactions of the MKB provide the basis for the four sub-questions of this research.

Methods

This mixed-methods study lasted five months and included two months of fieldwork. For the quantitative part of this research, ZonMw’s MKB questionnaire was adjusted to fit the objectives of this research. The online questionnaire was sent to all the applicants of the knowledge voucher via e-mail. The questionnaire was completed 22 times, one of which was completed partly.

Besides the questionnaire, semi-structured interviews were held with both applicants and advisors of the voucher. For a large part, the randomly selected participants of the first evaluation study were used. In total, seventeen interviews were conducted with nine advisors, seven applicants and with one interviewee who was both an applicant and advisor. The interviews lasted on average 45 minutes.

Excel was used for the analysis of the quantitative data. For the qualitative analysis, the recorded interviews were transcribed and a summary was shared with the interviewees to check the data for accuracy. Subsequently, the transcripts were analysed using thematic analysis. Open coding was used to find additional themes. The programme MAXQDA was used to perform the qualitative analysis.

Results

The interviews revealed many different reasons for applicants to join the knowledge voucher projects. Most applicants regarded the voucher as an opportunity to start a project that handles a pressing issue in their practice.

The first MKB category is dissemination and application activities. Many activities took place during the projects. Most projects started with an initial presentation of the best practice. Hereafter, the applicants were put to work to find collaboration partners. This resulted in the involvement of many different professionals in the gatherings. According to the quantitative data, on average 6.8 different activities took place during the projects. The activities were frequently focussed on informing, organising and implementing.

The second MKB category comprises the yielded products. The advisors shared many documents with the applicants. Therefore, it was less necessary to develop new products in the projects. Nevertheless, there were also new products developed in the projects, often in collaboration with the advisors. The mean number of products that was yielded in the projects was 4.5.

The third category is the collaboration during and after the project. Collaboration took place with a wide variety of partners, on average with 3.4 different partners. Most applicants mentioned that the multidisciplinary collaboration has significantly improved because of the project.

The final MKB category is financing. Co-financing and follow-up financing was obtained in more than half of the projects. Co-financing was common because the voucher did not cover the hours of the applicants or other professionals.

The interviews showed that the vouchers exceeded most of the applicants' expectations. In many projects, the objectives were partially realised at the time of the evaluation. The most frequent mentioned result of the project in the questionnaire was a perceived improvement in the quality of care.

Several elements were identified that could attribute to improving the societal impact of the voucher in the future. First, it is important to involve more healthcare professionals in the selection process of the projects. Second, sufficient structure should be provided in the projects. Third, it is necessary to have an enthusiastic group of professionals to stimulate the project. Fourth, the running time of the projects should be long enough to allow complete implementation of the innovation. Finally, a knowledge exchange between different applicants at the end of the projects is recommended to stimulate mutual learning.

Conclusion and discussion

In all four categories of the MKB, interactions have taken place in the knowledge voucher projects. In most projects the interactions have been productive because many professionals have used the results of the best practices, and structurally changed their manner of working. Because of the productive interactions on all four domains, it can be assumed that the vouchers have led to societal impact.

Besides the insight in the societal impact of the vouchers, this study also found elements of the voucher that can be addressed to further increase the impact of the projects. The most important elements ZonMw can address are the selection process, guidance during the project, the running time of the projects and a knowledge exchange at the end of the projects. These elements highly correspond to the elements that attribute to the successful spread of innovation that were mentioned in the literature.

To look at the knowledge vouchers in a broader context, the vouchers were related to ZonMw's goal to improve the quality of care. This study showed that it is difficult to demonstrate an effect of the vouchers on the quality of care. The interviews revealed some possible improvements in the quality of care, but these effects were not formally evaluated. The quality of care can be stimulated by expanding the selection process of the best practices with an assessment of the intervention's effectiveness.

The SIAMPI method was useful to assess the societal impact of the knowledge vouchers. This method overcomes the three challenges of impact assessment. This research showed that the SIAMPI method is a usable approach for impact assessment of implementation projects. Furthermore, the conducted study implies that all three interactions are connected and cannot appear by themselves.

The division in the four categories of the MKB is helpful to make the interactions more concrete. This division, however, also results in an overlap in the categories. Furthermore, a risk of the MKB approach is that the interactions are depicted without assessing whether the interactions were productive. A qualitative measure is thus necessary to provide context on the productiveness of the interactions.

A strength of this study is the mixed-methods approach, as well as the fact that both the applicants and advisors of many projects were interviewed. The number of participants in the questionnaire is a limitation of this study. Additionally, the possibilities of recall bias and socially desirable answers should be considered.

The outcomes of this study to the societal impact of knowledge vouchers are valuable for funding organisations such as ZonMw, as they might influence the policy concerning the vouchers in the future. Besides stimulating societal impact with knowledge vouchers, it is important that ZonMw creates a clear policy for the future concerning impact assessment.

Further research is necessary on the knowledge voucher in different contexts. Additionally, the MKB questionnaire needs further evaluation. Moreover, studies to the SIAMPI method are necessary to gain insight in the relation between the interactions.

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List of abbreviations

EUR	Erasmus University Rotterdam
GEZ	Geïntegreerde Eerstelijns Zorg
GP	General Practitioner
ICT	Information and Communication Technology
LUMC	Leids Universitair Medisch Centrum
MKB	Monitor Kennis Benutting
NIVEL	Nederlands Instituut voor Onderzoek van de Gezondheidszorg
NWO	Nederlandse organisatie voor Wetenschappelijk Onderzoek
OEL	Op Één Lijn
RIVM	Rijks Instituut voor Volksgezondheid en Milieu
ROS	Regionale Ondersteuningsstructuur
RVZ	Raad voor de Volksgezondheid en Zorg
SIAMPI	Social Impact Assessment Methods through Productive Interactions
SMOEL	Samenwerkings Monitor Eerste Lijn
VIMP	Verspreidings- en Implementatieimpuls
VU	Vrije Universiteit
VWS	Volksgezondheid, Welzijn en Sport
WHO	World Health Organization

1. Introduction

At this moment, the Dutch healthcare system faces several challenges related to demographical and epidemiological transitions (Ministerie van Volksgezondheid, Welzijn en Sport [VWS], 2008). These transitions, as well as the substitution of hospital care by primary care, increase the demand for primary care (de Bakker et al., 2005; World Economic Forum, 2013; Ministerie van VWS, 2008). To handle this rising demand and to preserve a high quality of care, alterations are necessary in the provision of care. The solution, according to the Ministry of Health, Welfare and Sport, is multidisciplinary collaboration between professionals in different domains (Ministerie van VWS, 2007).

The importance of collaboration is acknowledged by the World Health Organization (WHO, 2010). They described that many health systems are fragmented, resulting in unmet health needs of patients. Multidisciplinary collaboration can increase patient satisfaction and improve patient outcomes (WHO, 2010). Furthermore, this collaboration can positively affect the coherence of the provided care (Hansen, van Greuningen & Batenburg, 2010).

The Netherlands Organisation for Health Research and Development (ZonMw) finances and stimulates research in healthcare and healthcare innovation (ZonMw, 2016a). ZonMw established the programme “Op één lijn” (OEL) in 2009 to increase multidisciplinary and domain-transcending collaboration in the sectors prevention, care and social care (ZonMw, 2014). Some promising projects were established in the programme OEL, mostly involving innovative collaboration methods. However, most projects of the programme were executed on a small scale. In order to spread the knowledge and maximise the impact of these projects, ZonMw examined the possibility to make promising projects serve as an example to other practices in the Netherlands. As a result, the knowledge voucher project was started.

A knowledge voucher is an easy accessible subsidy instrument for healthcare practices, consisting of a maximum of 10,000 Euro. The knowledge vouchers were meant to stimulate practices to learn from experiences of others and implement change at their own location. With the granted money, 51 practices could hire an advisor from twenty of the best practices of the programme OEL. Because the advisors had been involved in the successful projects in the past, they had the knowledge and skills to advise other practices in this process as well. The advisor assisted the participating practices in the implementation of the best practice.

The knowledge vouchers were a relatively new method to subsidise projects to ZonMw. Since there was uncertainty about the effects of the vouchers, ZonMw wanted to gain insight in the spending of the money and the value of the project. Therefore, ZonMw set up an evaluation study in 2016. The aim of this study was to assess whether the knowledge vouchers were appreciated and whether this policy should be continued in the future. The evaluation provided valuable insights in the usefulness of the voucher (Klompmaker, Klop & Pieterse, 2016). Despite some limitations in the communication in the beginning of the project, the participating practices and advisors regarded the voucher as a valuable instrument to initiate innovation and collaboration. Because most projects were still running at the time of the evaluation, this evaluation could not provide insight in the societal impact of the knowledge vouchers.

Demonstrating societal impact is becoming increasingly important to funding organisations such as ZonMw (ZonMw, 2016b). Because of the novelty of the knowledge vouchers, the literature does not provide any further insight in the impact of knowledge vouchers. Several studies have been

conducted on the spread of best practices (Simmons, Fajans & Ghiron, 2007; Greenhalgh et al. 2004; Ploeg et al., 2014). However, these studies do not mention instruments to fund the spread of best practices. Hence, an evaluation study is necessary to the societal impact of knowledge vouchers.

At this moment, almost all knowledge voucher projects have finished and it is possible to evaluate the outcomes of the vouchers. Therefore, the objective of this study is to make recommendations to ZonMw on how to improve the knowledge vouchers by evaluating the societal impact of the vouchers on the participating practices. The objective will be met by answering the following research question: What has been the societal impact of the knowledge voucher projects?

This insight will not only help ZonMw to understand the impact of the knowledge vouchers and to improve the vouchers, but can also benefit the understanding of how to assess the impact of funding instruments in the future.

2. Increasing the impact of best practices in primary care

This chapter describes the knowledge vouchers of the programme OEL. To be able to comprehend the use of these vouchers, context will be provided on primary healthcare in the Netherlands, innovation, the role of ZonMw in addressing challenges in healthcare, the programme OEL, and measuring impact. This chapter concludes with explaining the conceptual framework and the sub-questions of this research.

2.1 Challenges primary care

Long-term care is becoming more common because of the increasing prevalence of chronic conditions and often leads to an increased care demand (NIVEL Zorgregistraties eerste lijn, 2016). Moreover, patient care becomes more complex because often multiple healthcare providers of primary as well as secondary care are involved in the care provision (WHO, 2010; Raad voor de Volksgezondheid en Zorg [RVZ], 1998).

The General Practitioner (GP) in the Netherlands has a gatekeeping function and is often the main healthcare provider of patients, who plays a substantial role in organising patient's care. The increasing complexity of patient's care induces a rise in the demand for the GP. Therefore, primary care needs to be organised in a more sustainable matter.

The Ministry of Health, Welfare and Sport, patient organisations and professional bodies agree that a strong and integrated primary care helps to make the care more sustainable (Ministerie van VWS 2007; ZorgImpuls, n.d.; Schrijvers, 2016). Integrated care is regarded as a continuum of preventive and curative services for patients across different levels of the health system (WHO, 2008). In practice this means that not only mono-disciplinary integration is necessary, but also integration between different disciplines. Furthermore, integration should occur between different domains such as health care and social care (Schrijvers, 2016).

For the organisation of integrated care, collaboration is necessary. In collaboration, healthcare professionals fulfil complementary roles and work together cooperatively. The responsibility for patient care is shared, which increases the awareness of other team members' knowledge and skills. The goal of the collaboration is to improve decision making and patients' care (Fagin, 1992; Baggs & Schmitt, 1988). The current focus on integration induces different and innovative ways of collaboration.

2.2 Healthcare innovation

Innovation in primary care is necessary in order to keep up with the changing healthcare sector. Innovation used to be regarded as a sole scientific and technological process. However, professionals in practice are much more involved in the innovation process nowadays. Interactions between scientists and professionals make innovations effective (Smits & Kuhlmann, 2004; van Rijn, 2015). This process in which both groups are involved, is called the co-evolution of science and society (Spaapen & van Drooge, 2011).

In the literature, many different meanings are attributed to innovation (Omachonu & Einspurch, 2010; Moullin, Sabater-Hernandez, Fernandez-Llimos & Benrimoj, 2015). In general, every definition of innovation should contain three main characteristics: a novelty, an application component and an intended benefit (Lansisalmi, Kivimaki, Aalto & Ruoranen, 2006). The novelty of innovation is arbitrary,

since the innovation can be new to an individual user or organisation, while others are already familiar with the innovation (van Leeuwen, 2006).

According to State Secretary for Health, Welfare and Sport innovation cannot be imposed on society, but arises unexpected. However, innovation can be encouraged by reducing the obstacles to innovate (van Rijn, 2015).

The aim of innovation in healthcare is more specific than the general aim to benefit the individual, the group or wider society (Anderson, De Dreu & Nijstad, 2004; West, 1990). The long-term goal of innovation in healthcare is to improve the quality of care (Omachonu & Einspruch, 2010).

Quality of care

In order to determine whether the quality of care has improved as a result of an innovation, it is important to discuss the definition of quality of care. According to the WHO, there are six dimensions of quality of care. Healthcare should be effective, efficient, accessible, acceptable and patient-centred, equitable, and safe (WHO, 2006). The meaning of these concepts will be explained in Box 1.

Effective
The provided healthcare is evidence-based and results in improved health outcomes for patients.

Efficient
The resources are used in the most optimal way.

Accessible
The care is geographically and timely accessible as well as appropriate and of sufficient quality.

Acceptable and patient-centred
The preferences of individuals and different societal groups are taken into account.

Equitable
There are equal opportunities for individuals to receive the necessary care, regardless of, for instance, race and gender.

Safe
There are as little as possible risks to the care users.

Box 1. Dimensions quality of care formulated by the WHO (WHO, 2006).

Most innovations cannot target all the dimensions of quality at once and thus strive to improve one or a few of aspects of the quality of care (van Linge, 2006). Moreover, most innovation in healthcare is incremental of nature (van Linge, 2006; van Leeuwen, 2006). This means that the system changes gradually and innovation does not disrupt old systems. Therefore, improving the quality of care is also an incremental process that takes time.

2.3 ZonMw

ZonMw is an important organisation that strives to improve the quality of healthcare in the Netherlands. ZonMw stimulates research in healthcare and health innovation, and attempts to integrate research, practice, policy and education. The main commissioners of ZonMw are the Ministry of Health, Welfare and Sport and the Netherlands Organisation for Scientific Research (NWO), although there are also private commissioners (ZonMw, n.d.a.).

When ZonMw receives an assignment via its commissioners, ZonMw starts an integrated programme. This programme aims to reach the goals of the assignment. The focus of programmes can be broad. In this manner, it is possible for ZonMw to work within several health domains at the same time. The programmes of ZonMw last on average four years. There are four different departments that execute these programmes: Science & Innovation, Prevention, Care & Well-being and Quality & Efficiency (ZonMw, n.d.a.). The organisation chart of ZonMw can be found in Figure 1.

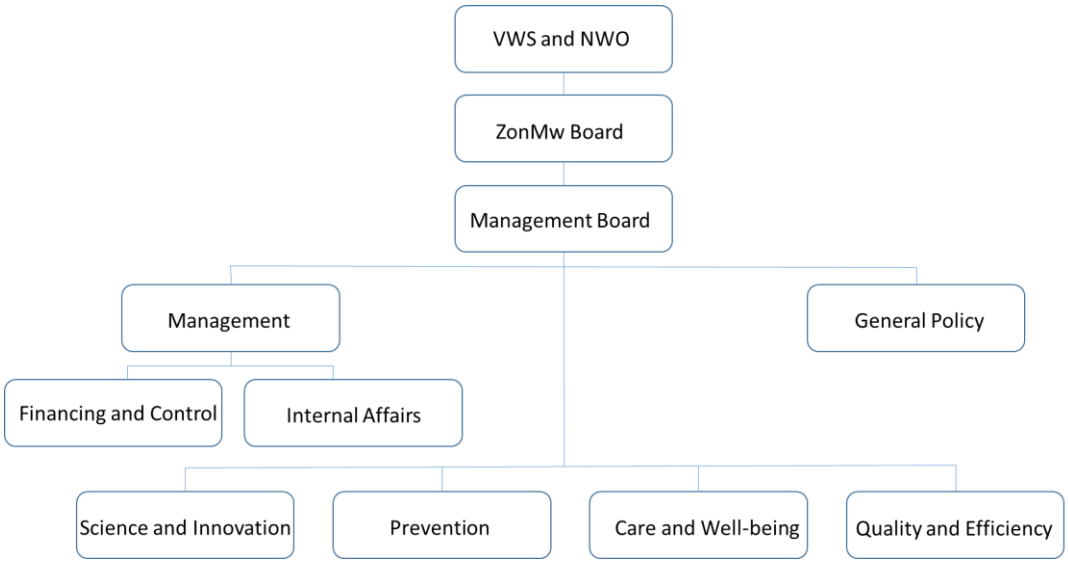

Figure 1. Organisation chart ZonMw

A project needs to contribute to the goals of the specific programme in order to be eligible for a subsidy. The subsidy allocation procedure of ZonMw can be found in Appendix I.

In their policy plan of 2016 to 2020, ZonMw explains that the meaning of health and healthcare is changing (ZonMw, 2016a). The definition of health of the WHO (WHO, n.d.) is no longer satisfying. Therefore, ZonMw uses the definition of health from Huber et al.: "Health is the ability to adapt and to self-manage, in the face of social, physical and emotional challenges" (Huber et al., 2011, p. 2).

This altered view on health integrates ZonMw's approach and changes their objectives for the future. ZonMw has set six main themes that give direction to future programming (ZonMw, 2016a):

1. Large, sustainable programme clusters
2. International collaboration
3. Open research, talent development and fundamental knowledge
4. National Science agenda
5. Practice based programming, participation and knowledge agendas
6. Increasing impact

2.4 Impact enhancement

As mentioned in Section 2.3, one of ZonMw's main objectives for the future is to increase the impact of their programmes. In accordance with ZonMw's objective, many articles report that impact is becoming an important requirement for competitive funding in research (Donovan, 2011; Canadian Academy of Health Sciences, 2009; Hill, 2016).

The importance of impact assessment is also increasingly recognized by governmental bodies. A letter of the State Secretary for Education, Culture and Science from January 2017 underpins this

(Dekker, 2017). Dekker states that in the past years, impact assessment and enhancement has increasingly become an agenda item of many research institutions. The objectives of Dutch universities support this claim, since after education and research, valorisation is their most important mission (Erasmus University Rotterdam [EUR], n.d.).

Impact must be distinguished between societal impact and scientific impact. Scientific impact used to be the only manner of assessing impact. Scientific impact focusses on the scientific output of a researcher by counting the most cited papers and the citation frequency (Bornmann & Daniel, 2008). Recently, more attention is drawn to societal impact.

The term societal impact is frequently used interchangeably with valorisation, social impact and many other terms (EUR, n.d.; Bornmann, 2013). In this research, the term societal impact will be used, as this is the most common term in the literature. Which definition of societal impact is used depends on the context in which it is used (Spaapen & van Drooge, 2011; EUR, n.d.; Bornmann, 2012). Most definitions have in common that regard a broad "social, cultural, environmental and economic return" from results of a project or research (Bornmann, 2012, p. 673).

The recent focus on impact is reflected in the programmes of ZonMw. In the next sections about the programme OEL and the knowledge vouchers, this will be emphasised.

2.5 Programme OEL

In 2009, ZonMw received an assignment from the Ministry of Health, Welfare and Sport to establish a programme to increase the organisational power and the innovative ability of care close to home (ZonMw, 2009). Most healthcare organisations at that time consisted of various small entities, with a narrow focus on their own patients. Hence, collaboration between the classical domains of prevention, care and social care and a more integrated approach for patients was desirable. The programme OEL was one of the first programmes in the Netherlands to stimulate this domain-transcending. In the following years, many initiatives have followed.

The programme OEL was a five-year lasting programme which cost €16.625.000. This programme was not focussed solely on primary care, but involved all easily accessible care close to home. The main goal of this programme was to acquire practical knowledge on different forms of collaboration, their relative costs and effects, and success and failure factors (ZonMw, 2009). The programme consisted of three programme lines: practical projects, research, and implementation instruments.

The first programme line involved the practical projects. This programme line aimed to generate knowledge on examples of successful and non-successful collaboration projects and to support the successful projects. This programme line had the priority of the programme OEL. When the characteristics of successful projects were identified, bottom-up subsidy rounds were initiated for starting and developing collaboration projects. The subsidy could be granted to 67 of the 467 registered projects (ZonMw, 2015). The output of these projects was diverse, ranging from communication tools to business cases.

ZonMw performed an evaluation to the programme OEL in 2015. This evaluation showed that the first programme line resulted in an increase in knowledge regarding the diversity of projects and initiatives. The subsidy initiated people to start organisational innovations and to come up with new collaboration methods (ZonMw, 2015).

The second programme line focussed on research. The goal of this part of the programme was to answer overarching questions and to enhance and bundle the scientific knowledge about the different collaboration methods and their success and failure factors. These insights were necessary

to optimise the results of programme line one and three. All projects were followed from the start of the programme in an accompanying scientific research called the SMOEL (Samenwerkings Monitor Eerste Lijn). This research included evaluation and feedback moments, theme meetings and case studies. Later on in the programme, thirteen research projects were started.

The evaluation to the second programme line showed that, in general, there was a positive attitude towards the research line of the programme. However, there was also disappointed among several stakeholders about the outputs of the research. Moreover, few end-results of the evaluation had been linked back to the participants in the projects (ZonMw, 2015).

The final programme line aimed to obtain instruments for the transmission and implementation of the gathered knowledge about collaboration. The goal was to make knowledge and experiences of the participants in the projects available to a broader public to stimulate others to take action. Successful projects with a lot of public support were asked to spread their results. These projects could apply for a dissemination- and application impulse (Verspreidings- en Implementatieimpuls: VIMP) of a maximum of €50.000. The goal of this VIMP-application was to enhance the impact of the initial project (ZonMw, 2016c). The outputs of these VIMPs could be, for instance, manuals on the implementation of innovation. This subsidy was granted to 23 projects.

Despite the efforts to spread the results of the successful projects, this programme line did not achieve the desired results. The evaluation in 2015 showed that the focus of the programme OEL was particularly on the first programme line, which resulted in less attention and investments in the third programme line (ZonMw, 2015).

2.6 Knowledge vouchers

The evaluation of the programme OEL showed that solely making the results of the projects accessible to other healthcare professionals was not sufficient to increase the impact of the successful projects. There was a demand for help and support in implementing best practices. Therefore, the knowledge vouchers were established at the end of the programme OEL, to give a final impulse to the process of spreading best practices and to increase the impact of the projects (ZonMw, 2015). The knowledge vouchers aimed to help the participating practices to increase their organisational development and interdisciplinary collaboration in order to provide a more integrated care (Klompmaker, Klop & Pieterse, 2016).

Selection of best practices

In the programme OEL, 67 projects were executed. In 2014, a report was published that described the projects of the programme OEL with a high implementation potential: the best practices (Eijssens & Konings, 2014). Two advisors developed assessment criteria, and evaluated all the available project materials. Projects with a high implementation potential were defined as projects with the ability to:

- Self-introduce the developments of the project
- Scale up the project on a small scale in the near surroundings
- Scale up the project on a large scale in regions or within larger organisations
- Transfer the projects to different themes, target groups and sectors

In total, 22 projects were described to have a high implementation potential (Eijssens & Konings, 2014). Eventually, twenty projects were used as best practices in the knowledge voucher project because two participants opted out of the voucher projects (Klompmaker, Klop & Pieterse, 2016).

The twenty best practices were displayed on ZonMw's website in 2015. For each project, a short description was available regarding the content of the project. The products that had been developed in the project were included in this summary. Furthermore, most project leaders made an elevator pitch to briefly explain the main goals of the project and the target audience. The possible applicants could view these pitches on ZonMw's site. These materials aimed to inform applicants of the vouchers about the projects and help them decide which project was suitable for their practice (ZonMw, n.d.b.).

The knowledge voucher instrument

ZonMw shortened the registration time for the application because of an extensive interest in the knowledge vouchers. The available €500,000 was divided over 51 knowledge vouchers, each of a maximum of €10,000 (Klompmaker, Klop & Pieterse, 2016). The voucher could only be used to pay for the advise-hours of the advisor and could not be spent on hours or costs of the applicant (Klompmaker, Klop & Pieterse, 2016).

The common subsidy application procedure of ZonMw is complex and lasts six to ten months (ZonMw, 2016d). The knowledge vouchers were a new and innovative subsidy instrument to ZonMw. This subsidy was easier accessible than usual subsidies: only a short motivation needed to be provided on why the specific best practice was chosen. Another requirement for the applicants was a registration in the Business Registration of the Chamber of Commerce, to verify the organisation's existence and ensure that maximum one voucher was granted per applicant.

Previous evaluation study to the knowledge vouchers

In 2016, an evaluation of the knowledge vouchers was conducted, commissioned by the Ministry of Health, Welfare and Sport. The main goal of this evaluation was to find out whether the voucher project was successful. This evaluation consisted of questionnaires that were distributed among the applicants and the advisors. Moreover, eleven applicants and eight advisors were interviewed (Klompmaker, Klop & Pieterse, 2016).

The evaluation provided insight in the usefulness of the vouchers. 90% of the participants considered the knowledge voucher as an useful instrument. Furthermore, the participants were pleased with the advice and the steps they took towards multidisciplinary collaboration. Also, many participants mentioned that without this subsidy, the innovation would not have been possible (Klompmaker, Klop & Pieterse, 2016).

According to the evaluation, the main obstacles in the knowledge voucher project were in communication and organisational aspects of the projects. Participants indicated that the content of the best practices could have been presented more clearly on the website of ZonMw because the project's purposes and target group were not always evident. Moreover, the time between the honoured application and the realisation of the project was short. This led to too little preparation time for some of the participants (Klompmaker, Klop & Pieterse, 2016).

Because the projects were still running at the time of the first evaluation, the impact of the knowledge vouchers on the practices could not be assessed.

2.7 Measuring the impact of knowledge vouchers

The goal of the knowledge vouchers was to increase the impact of the programme OEL. The vouchers have a societal impact if they have stimulated the successful implementation of the best practices at a new location. It is not clear whether this goal has been met. Therefore, an evaluation study to the societal impact of the vouchers is necessary.

Evaluation research comprises systematically collecting data about the characteristics of a programme, product, policy or service. Evaluation research often aims to provide insight in what is going well, what needs to be changed and how this can be changed (Gray, 2014). The summative evaluation in this research is performed to assess whether the knowledge vouchers deserve a continuation and what can be improved to enhance the impact.

SIAMPI

Evaluating and measuring societal impact is challenging because of several reasons. Firstly, there is often a wide time span between the project and the achieved societal impact. Secondly, there are often multiple causes for the observed impact. Therefore, it is difficult to determine what can be attributed to the specific project. Lastly, there are no clear indicators available to measure the impact (Martin, 2007; Spaapen & van Drooge, 2011).

Because of the temporality and attribution problem, it is not feasible to measure impact with outcome indicators. Therefore, models such as the Research Impact Framework (Kuruvilla, Mays, Pleasant & Walt, 2006) are not suitable to measure the societal impact of the knowledge vouchers. There are other models available, that do not focus solely on the outcome indicators, but also on the process of the research. The Payback Framework is a widely known and frequently used model that measures impact in this manner (Buxton & Hanney, 1996). This framework represents seven stages of the research process and five categories of individual payback from research, such as capacity building and health benefits. The Payback framework is mainly focussed on research and the research process. Therefore, this model is less suitable for implementation projects that do not necessarily move through the seven stages. Furthermore, the categories of individual payback in this framework are still final outcomes that are difficult to measure.

A model that is more suitable for this research is the Social Impact Assessment Methods through Productive Interactions (SIAMPI). This method does not attempt to link research to ambitious impact goals, but focusses on traceable indicators close to the research or project. Focussing on intermediate outcomes is more realistic and concrete than trying to attribute research results to true impact. Especially in the knowledge voucher projects the focus on the measurable parts of societal impact is of importance. The true impact of the voucher is difficult to measure because the voucher project is only a small part of the practice. Furthermore, the final impact of many projects is probably not achieved yet because many projects are still running.

The definition of societal impact that is used in the SIAMPI model and that will be used as the definition of societal impact in this research, is the following: “Social impact of scientific research refers to measurable effects of the work of a research group or program or a research funding instrument in a relevant social domain. The effect regards the human well-being (‘quality of life’) and or the social relations between people or organizations.” (Spaapen et al., 2011, p. 9). The SIAMPI approach embraces the societal impact in a broad manner because there is no clear border with other impacts such as health impact and scientific impact.

The SIAMPI approach recognises the importance of productive interactions in achieving societal impact. An interaction is defined as “a contact between a researcher and a stakeholder”. To be of value, the interaction should be productive. Productive interactions are “exchanges between researchers and stakeholders in which knowledge is produced and valued that is both scientifically robust and socially relevant” (Spaapen et al., 2011, p. 4). If the interaction is productive, this will lead to efforts by stakeholders to use or apply the results of the research, information or experiences. There are often multiple productive interactions in one project. The productiveness of the interactions

is evident in behavioural change of the involved stakeholders. This behaviour change is eventually inducing societal impact. This means that the method assumes that societal impact cannot be achieved without interactions being productive. The productive interactions serve as indicators for the final societal impact.

According to Spaapen et al. (2011) there are three categories of interactions that should be productive to lead to societal impact: direct interactions, indirect interactions and financial interactions. *Direct interactions* entail all interactions through formal institutional channels and informal contacts. The informal contacts are mostly unintended interactions. If these informal contacts are followed by other interactions, they can lead to societal impact. The second category is *indirect interactions* through a medium. The medium is an intermediate carrier of the interaction. This medium can consists of all types of texts, but also another person can serve as the medium. The last category includes *financial interactions*, which occurs when stakeholders engage in an economic exchange with researchers. This exchange can include a financial contribution or an "in kind" contribution consisting of products or services. Financial interactions can significantly increase the impact of a project. However, the category financial interactions will always be accompanied by direct or indirect interactions (Spaapen et al., 2011).

Development of the SIAMPI method

In the development of the SIAMPI method, several case studies were performed in the sectors healthcare, ICT, nanotechnology and social and human sciences. These case studies were conducted at the European level and in four European countries, including the Netherlands. For the healthcare sector, two cases of the LUMC and NIVEL were studied. Because many different cases were studied, the researchers conclude that the SIAMPI method is flexible enough to allow contextual variation and thus can be used in a large variety of contexts.

Monitor knowledge utilisation

In reaction to the growing attention on societal impact, ZonMw started a project group to investigate suitable methods to measure the societal impact of projects. Together with the Rathenau institute, this group developed a model for ZonMw to measure impact (ZonMw, 2016e). This model is based on the SIAMPI method and shows many similarities to the SIAMPI method. In order to enhance the usability of the method for ZonMw's projects, the project group made some adjustments to the categories of the original SIAMPI model. The adjusted model is called the monitor knowledge utilisation (Monitor Kennis Benutting: MKB) and includes four different interactions:

- Collaboration: this category involves all personal contacts, individual as well as in groups that took place during or after the project. The collaboration partners range from patients to educational institutes.
- Dissemination and application activities: this category involves all the activities that were organised during or after the project with the focus on spreading the gathered knowledge. These activities can be split in informational, educational, organisational, motivational, facilitating, market-oriented and patient-oriented activities. This category can be considered as a direct, as well as an indirect interaction, dependent on the type of activity.
- Products: this is a diverse category that includes all the products that the research or project yielded. This can involve articles, guidelines, policy reports et cetera.

- Financing: this category includes all the additional funding that the involved organisation or researcher received from different parties. This financing could occur during the project (co-financing), but also afterwards (follow-up financing).

In this research, the MKB will be used to assess the societal impact of the knowledge vouchers because this model covers the productive interactions of the SIAMPI method in a more concrete manner, which makes it more useful in practice. Furthermore, ZonMw aspires to use this model for all societal impact assessments, of which this research is one of the first. The conceptual framework that is used in this research is represented in Figure 2.

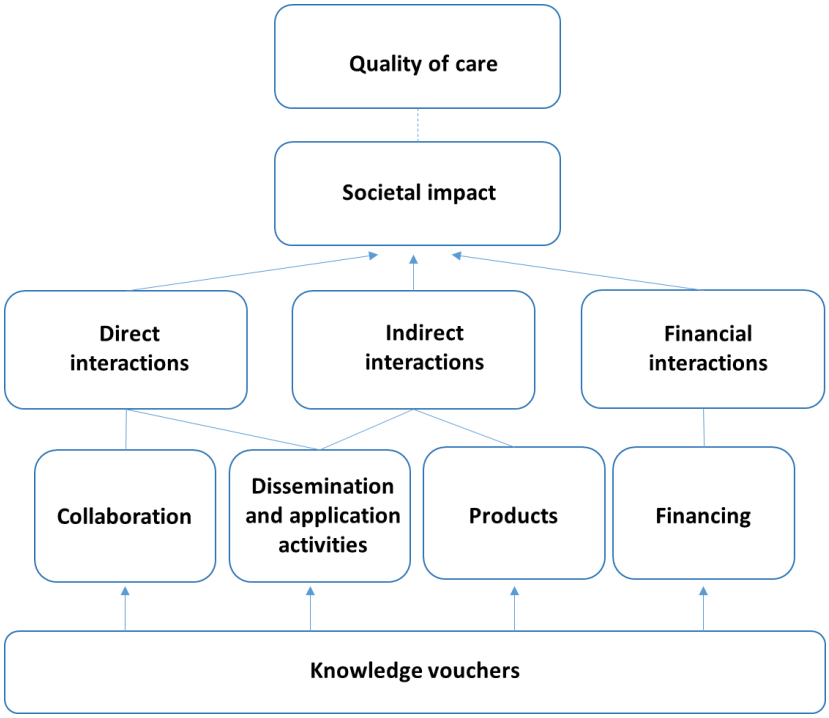

Figure 2. Conceptual framework, combined SIAMPI and MKB model.

The four productive interactions of the MKB are the indicators for societal impact that will be used in this research. Therefore, the sub-questions of this research are based on the four productive interactions. The following sub-questions were formulated based on the productive interactions:

1. In what way have the knowledge vouchers contributed to the organisation of dissemination and application activities in the participating practices?
2. In what way have the knowledge vouchers contributed to the development of products in the participating practices?
3. In what way have the knowledge vouchers influenced the (multidisciplinary) collaboration in the participating practices?
4. In what way have the knowledge vouchers stimulated financing for the innovation in the participating practices?

These sub-questions will help to answer the main research question of this study: What has been the societal impact of the knowledge voucher projects?

3. Methodology

This study aimed to evaluate the societal impact of the knowledge vouchers and to make recommendations on how to improve this impact. The methods that were chosen to conduct this study will be discussed in this chapter. First, the chosen study design will be explained. Then, the study population, the data collection methods, and the data analysis will be discussed. This chapter concludes with the practical and ethical considerations of this study.

3.1 Study design

This study was performed at ZonMw at the department Quality and Efficiency, under supervision of an advisor from ZonMw and a supervisor from the VU University Amsterdam. In total, this study lasted five months.

This study was an evaluation study with a mixed methods approach, which entails that this research included both a quantitative and a qualitative part (Johnson, Onwuegbuzie, Turner, 2007). For the quantitative part of this research, questionnaires were completed by the applicants of the knowledge vouchers. The qualitative part of this research consisted of semi-structured interviews that were conducted with the knowledge voucher applicants and advisors.

The mixed-methods approach was considered the most valuable to gain a good overview of the projects, as well as an in depth insight in the societal impact of the projects. According to Greene, Caracelli and Graham (1989), mixed methods can be chosen for several reasons: expansion, complementarity, initiation, development and triangulation. This study used the mixed methods approach for both expansion and triangulation. The quantitative and qualitative part of this research were executed simultaneously.

With the quantitative element of this research a large part of the applicants could be reached, which increased the variety of opinions. Spaapen et al. (2011) stated that in addition to a quantitative approach, a qualitative study element is necessary to measure impact. Although a questionnaire can assess whether the interactions have occurred, it lacks insight in the productiveness of these interactions. Hence, the qualitative part of this research helped to explain the results of the quantitative analysis. Furthermore, a study of Donovan (2007) indicated that a qualitative measure in impact assessment is essential to provide a fair assessment of the impact in different contexts. In this research, many different contexts needed to be considered, as projects were executed throughout the country within different settings.

3.2 Study population

Study sample

In this study, both the applicants and the advisors of the knowledge vouchers were involved. The applicants had the best view on the change the knowledge vouchers brought because they were involved in the execution of the projects from 2015 onwards. The advisors could give a proper overview of the process of the project. Furthermore, both the applicants and advisors provided insight in whether their objectives had been met.

In the first evaluation study into the knowledge vouchers in 2016, the study subjects were randomly selected from a list of applicants and advisors that reported to be willing to participate in an interview. Nineteen participants took part in the evaluation study in 2016.

In this research, it was attempted to re-interview the participants of the first evaluation. Re-interviewing the same participants as in the previous evaluation, would lead to a more complete insight in those participants, as complementary data to the first study were gathered.

According to Onwuegbuzie and Leech (2007) the sample size of a study should be large enough to achieve data saturation. However, the sample cannot become too large, in order to be able to extract rich data within the given time frame for the research (Onwuegbuzie & Leech, 2007; Flick, 2009). The number of nineteen participants of the first evaluation was considered feasible within a schedule of two months for conducting the interviews. As not all participants of the first evaluation were willing to participate again in the second round of the evaluation, additional participants were randomly chosen from the list of applicants and advisors. One important criterion for the selection of new participants was that the applicants and advisors were from a different project than those already on the participant list, in order to maximise the variation of the sample.

Recruitment

To recruit participants for the quantitative part of this study, questionnaires were sent to all the applicants of the voucher because they had the most insight in the current situation of the project. The participants were asked to complete the questionnaire within two weeks after sending the e-mail. If the participants did not fill out the questionnaire after one week, a reminder e-mail was sent. 22 respondents completed the questionnaire, of which one respondent completed the questionnaire partly. Eight of the 51 applicants also participated in the interviews. They completed the questionnaire together with the researcher after the interview.

To recruit participants for the interviews, the applicants and advisors were approached by e-mail. The e-mail explained the purpose of the study. The report of the first evaluation was attached to the e-mail. If the applicants and advisors did not react within two weeks after sending the e-mail, they were called to confirm whether they wanted to participate in this study. In total, three applicants were not willing or not able to participate in this study. Other participants were sought to compensate for this loss of participants. Eventually eight applicants and ten advisors took part in the interviews conducted in this study. One participant was both an applicant and advisor, and is counted in both groups. The flowchart of the study participants can be found in Figure 3.

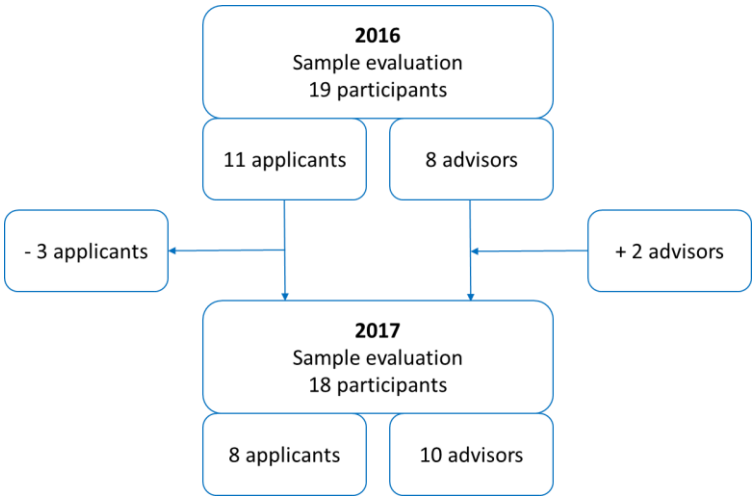

Figure 3. Flowchart study participants

3.3 Data collection methods

Quantitative data collection

The MKB questionnaire was the basis of the quantitative part of this research. ZonMw developed this instrument to measure the impact of their projects. This research is one of the first to use this questionnaire in practice. A research conducted by Ferdinandus in 2016 provided insight in the validity of this questionnaire (Ferdinandus, 2016). The MKB questionnaire was considered to be a useful instrument to measure impact. The MKB questionnaire was adjusted to fit the purposes of this research, but remained similar to the original version. The advantage of using an existing questionnaire is that this increases the transferability to other studies (Gray, 2014).

The questionnaire was originally designed to provide quantitative data from final reports of projects (Ferdinandus, 2016). In this research, however, final reports of the projects were not available. Hence, the MKB questionnaire was completed by the knowledge voucher applicants themselves.

To facilitate participation in the questionnaire an online format was chosen, using Surveymonkey. The participants could fill out the questionnaire by clicking on the link in the e-mail they received. The literature shows that online questionnaires yield similar results to paper-based questionnaires (van de Looij-Jansen & de Wilde, 2008). Therefore, this was an appropriate format for the questionnaire. The questionnaire can be found in Appendix II.

Qualitative data collection

The interviews in this research were conducted in a semi-structured manner. This approach is flexible and allows adjusting to newly gathered and unexpected information. Moreover, probing questions can be used to clarify answers (Cohen, Manion & Morrison, 2013).

In advance of the interviews, a topic list was made for the applicants and advisors. The topics that should be addressed in every interview were divided per concept of the conceptual framework. Before each interview, the available material on the project was studied to gain insight in the context of the project and the project-specific objectives.

The interviews lasted about 45 minutes each. Some interviews were conducted via the phone, others face-to-face at the location of the participant or at ZonMw. Typically, conducting interviews by phone is considered as only appropriate for short and structured interviews (Harvey, 1988). A study by Sturges and Hanrahan (2004), however, reported that there were no differences in outcomes or in the quality of data between face-to-face and telephone interviews. Because of this conflicting evidence on the effectiveness of telephone interviews, it was attempted to conduct as many interviews as possible face-to-face.

3.4 Methods of analysis

For the quantitative part of this research, the data in Surveymonkey were exported to excel. For each question, the information was checked on accuracy and missing answers. Then, the data were analysed by calculating the mean scores and frequency distributions for each question. Subsequently, the data were processed into bar charts.

For the analysis of the qualitative part of this research, the participants' permission was asked to record the interviews. The recorded interviews were transcribed verbatim within a couple of days after the interviews. From the beginning, the data were anonymised. However, the difference between applicants and advisors remained visible in the transcripts because of the different topics that were discussed in the interviews.

During the interviews, the researcher took notes that were processed directly after the interviews. These notes were integrated in a summary of the interview, which was provided to the participants within two weeks after the interview. The participants could check this data for accuracy and leave comments or adjustments.

The programme MAXQDA was used to analyse the data (MAXQDA, n.d.). At first, thematic analysis was performed. A theme is considered to capture something important in relation to the overall research question (Gray, 2014). The themes were based on the conceptual model of this research. Because the themes were made in advance of the interviews, new topics could emerge that did not fit within the pre-defined themes. For those parts of the transcripts, open coding was used to form new codes (Gray, 2014). The new codes were added to the code sheet.

At the beginning of the analysing process, the researcher and the on-site supervisor both coded one interview and discussed the outcomes. This resulted in adjustments to the code sheet and new themes. Additionally, another researcher coded three interviews. The coding of the two researchers was discussed afterwards and did not lead to further adjustments to the code sheet. The final code sheet can be found in Appendix III.

The summaries, including the comments of the interviewees, were read after the analysis of the data. The summaries were then compared to the results of the data and additional information could be processed in the results.

The analysed data of the interviews and the questionnaires were combined to provide a conclusion on the impact of the knowledge vouchers. This resulted in a report and a presentation at the VU University Amsterdam and at ZonMw.

3.5 Practical and ethical considerations

Participation in this research was voluntary and all data were analysed anonymously. No informed consent form was provided to the participants in advance of the interviews. However, the participants agreed on participation by e-mail, and before the interviews again by phone or face-to-face. The submission of the online questionnaire was considered as sufficient affirmation.

Some considerations concerning the objectivity, validity and reliability of this research will be discussed next. The positivist view on research involves that the researcher must be as distant as possible from the study subject in order not to influence the study (Mays, 1995). However, according to Patton, distance does not necessarily guarantee objectivity (Patton, 2002). In qualitative research it is much more difficult to stay objective than in quantitative research, as the researcher is intensively involved in the research process. Self-reflection and insightfulness in the procedures are the most important instruments to guarantee objectivity. In this research, reflection played an important part as this was frequently discussed with the on-site supervisor. Furthermore, the researcher was not an employee of ZonMw and had thus not been involved in the knowledge voucher projects, which increased the objectivity of the researcher.

Validity means that the research measures what was intended to be measure (Gray, 2014). Internal validity concerns to what extent the outcomes have a causal relationship to the project or research. This is of importance because the impact in this research should be attributed to the knowledge vouchers and not to other influences. The MKB model that is chosen in this research assists in preventing false causal relations because it focusses on intermediate outcomes. Moreover, the open attitude in the interviews helped increasing the validity of the findings. Furthermore, the internal validity was assured by member checking the data during the interview by paraphrasing.

A final consideration includes the reliability of the research, which concerns the consistency and stability of the gathered data. The topic list that was made in advance of the interviews aided to increase the reliability of the data. Furthermore, the reliability of the data was assured by interviewing both the applicant and the advisor. In this way, the data could be checked for accuracy.

4. Results

In this chapter, the results of both the quantitative and qualitative analysis will be discussed. The quantitative data will provide an overview of the impact of the knowledge voucher projects, and the qualitative date will provide the necessary context and will elaborate on the quantitative results. The quantitative and qualitative data will be discussed intertwined to be able to directly compare the data. The quotations of the interviewees were translated to English, the original Dutch quotes can be found in Appendix IV.

First, an overview of the participating applicants and advisors will be provided. Then, the starting situation of the projects will be discussed to provide necessary context. Thereafter, the results will be discussed per sub-concept of the MKB model: dissemination and application activities, products, collaboration and financing. The final section of this chapter will give information on the results of the projects according to the participants. Moreover, this section will cover the effective elements of the voucher and possible improvements to enhance the societal impact.

4.1 Sample characteristics

In total, 22 applicants completed the questionnaire. The questionnaire consisted of six different themes: objectives, results, activities, products, collaboration and financing. In addition to the questionnaire, seventeen participants were interviewed. For all eight projects in which the applicant was interviewed, the knowledge voucher advisor was interviewed as well. The advisors guided one to five different applicants in the voucher project. In the interviews, ten different projects were discussed which were executed at 25 different locations. The table in Appendix V provides an overview of the advisors and the corresponding applicants.

The applicants of the voucher were employed at various organisations. In most cases, the applicants were healthcare professionals who applied for their organisation. Two out of the eight interviewed applicants applied for the parent organisation and divided their voucher over several of their practices. One of these applicants executed the project in five different practices. The other applicant used one of the two received vouchers to spread her own best practices in their network to 23 new locations.

In most projects, the advisor was a person who had already been involved in the best practice for a long period. The advisor was always someone with plenty of expertise on the best practice. Frequently, the advisor fulfilled an advisory or organisational function in the example project.

4.2 Start of the project

Most applicants regarded the voucher as an opportunity to realise a project they had already thought of starting in the past. One GP, however, applied for the voucher because of a completely different reason. He was annoyed about the subsidies that are granted without consulting healthcare professionals about the issues in practice.

> *"In summer I saw something passing by about the possibility to apply for a subsidy and I did not appreciate that. A lot of GPs annoys that […] because a lot is made up from management layers what would be good for GPs [...] so then I just applied in two minutes."* (Respondent 14, Applicant)

A lot of applicants began the knowledge voucher project from the bottom, with only an idea of what they wanted to achieve. The most frequent mentioned goal of the applicants was to improve multidisciplinary collaboration. Furthermore, gaining knowledge about the best practices and the implementation of renewal were common goals. All objectives were practical of nature.

The expectations of the applicants of the knowledge vouchers were diverse. Three of the eight interviewed applicants mentioned that their goal was not to adopt the example project in their practice. Two of these applicants applied for the voucher to learn from a specific part of the example project. The other applicant wanted to start a completely different project from the example project.

> *"It is different from the programme we were executing […] but we though we can just see what we can learn from it. Copying was never our intention […] but there might be aspects that we can use"* (Respondent 11, applicant)

The starting situation for three of the eight applicants was different from the others. One applicant practice had already set up a significant project before signing up for the voucher. The reason for this applicant to apply for the voucher was to gain financial support for the project. Additionally, two other applicants had just started a project with the subject of application prior to the application for the knowledge voucher project.

For the advisors, there were other reasons to participate in the knowledge voucher project. In many cases, the organisations were already involved in the distribution of knowledge. The knowledge voucher provided an opportunity for the advisors to spread the use of their method or to stay involved with the example project. Furthermore, the knowledge voucher could provide insight into how the method works in a different population. In two cases, the advisors regarded the knowledge voucher as an opportunity to demonstrate health insurances how their project could be applied to a different location. In this manner, they tried to obtain structural financing.

> *"We want to implement this approach structurally at many locations in the Netherlands. If you only have an innovative project at one location in the Netherlands, you will never obtain structural financing for it, so we need to disseminate it"* (Respondent 5, advisor)

4.3 Dissemination and application activities

The activities that took place during and after the projects is one of the four MKB categories. This category was measured both quantitatively and qualitatively.

Common activities

The applicants were asked in the questionnaire about the activities they conducted during the project. The question about the conducted activities had 26 answer options and an option to fill in a new answer. The answers to this question revealed that many different activities took place during the projects, as all the possible answer options were chosen. The mean number of activities that took place was 6.8 per project, ranging from 1 to 23 activities. In Diagram 1, the activities that took place during the project are depicted. The questionnaire revealed that the conducted activities were frequently focussed on informing, organising and implementing.

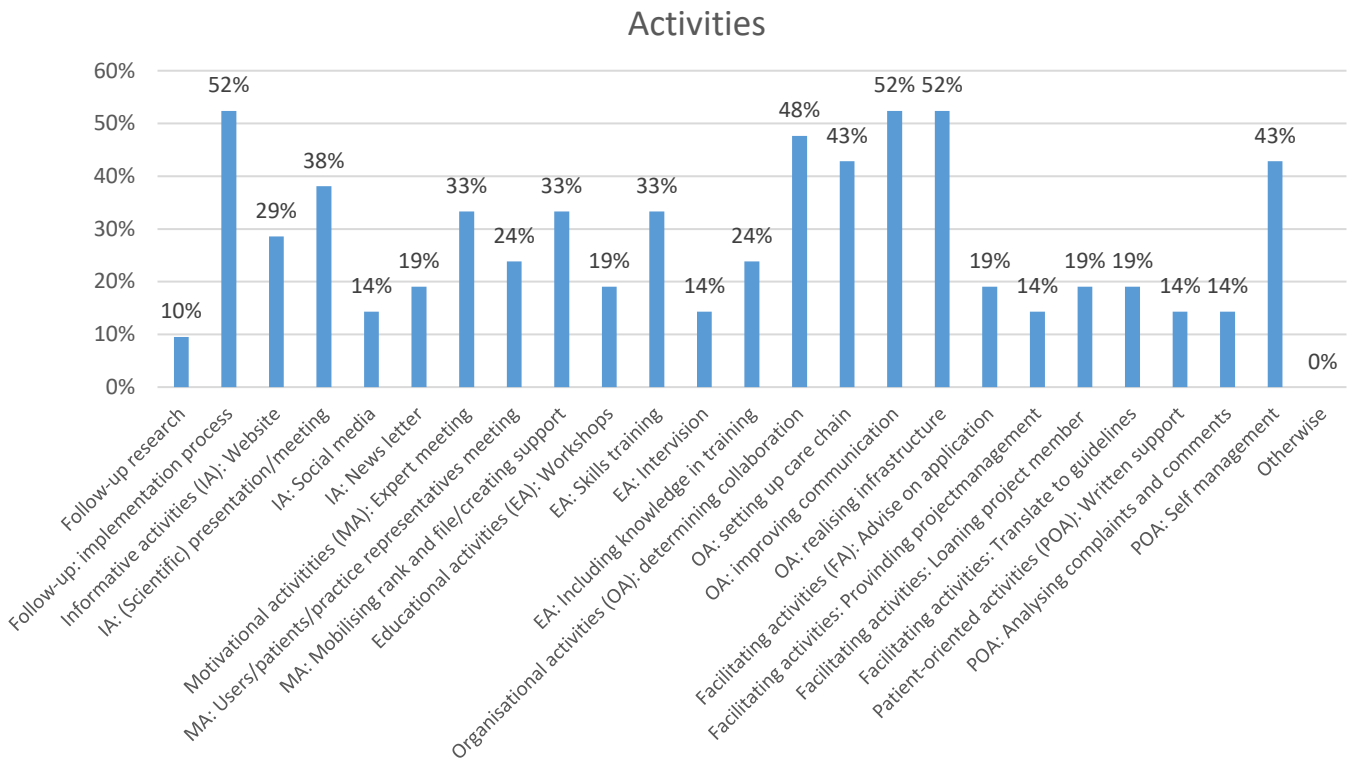

Diagram 1. Activities during the projects in percentages (n=21)

The interviews provided more insight in how the activities were divided among the project. Often, the first contact moment between applicant and advisor consisted of a conversation about the example project and the goals of the applicant. In almost all projects, the objectives were registered in a plan of action. These plans described the division of tasks and the planning of hours. When an example project had more than one applicant, the plans of action were adjusted to the applicants because they often had slightly different goals. During the projects, the plans of actions were often adjusted to fit the current situation. In a few projects, the process was completely iterative and no start document was used.

> *"We made a document to start from […] but when it comes to innovation processes I believe more in iterative strategies than in in-advance planned strategies [...] if you are not prepared to adjust things along the way to what you find, then I do not believe in innovation processes"* (Respondent 5, advisor)

After the initial conversation, the advisors often presented the best practice for a small group of professionals at the location of the applicants. Thereafter, the advisors visited the applicants often. Many interviewees reported that it is difficult to name the exact number of visits. Yet, it became clear that many presentations, trainings and other contact moments were organised during the projects. This is similar to the quantitative data. Some of the projects were distant to the location of the example project. In those situations, more guidance via e-mail and telephone occurred.

Activities that frequently took place in the projects were case study lunches, symposia, trainings and workshops. Because it was attempted to stimulate the multidisciplinary collaboration in many projects, the advisors suggested to invite as many involved professionals as possible. Hence, the applicants mapped their network and invited all relevant stakeholders. This resulted in well-visited

trainings with a multidisciplinary audience. Most advisors organised the first couple of meetings, after which a project group of applicants and stakeholders took this over.

Most advisors that guided more than one applicant arranged the gatherings for each applicant separately. There were, however, some advisors that merged a couple of sessions with the different applicants because of efficiency reasons. One advisors connected different applicants already in the first training session, to start building a network in this manner.

> *"And we could connect the other four (applicants), it was positive that the project was not spread over the entire Netherlands. So what I did is I rented Van der Valk in Hoorn and made sure everyone was taken care of for two days to be able to network, write things down, set up things and develop criteria."* (Respondent 4, advisor)

In a couple of projects, the advisors encountered other parties that conducted a similar project to theirs. The intention of a couple of advisors was to connect the projects and in this way learn from each other. Most of the projects, however, continued side by side, without merging. Nevertheless, knowledge exchange between the advisor and other parties happened in a lot of projects.

In one project, merging with a similar project in the region happened. In that project, the advisor of a ROS[1] took part in the trainings of the knowledge voucher advisor, and there was frequent contact between both advisors.

Deviant activities

The method described above was the most common approach within the projects. There were a couple of projects in which the advisor had a different approach. These approaches will be discussed next.

In one project, a pilot started in which a geriatric specialist was loaned one day a week to the general practice of the applicant. In this manner, the GPs could get to know the work of the geriatric specialist. The goal of this approach was that the GPs accepted the specialist as a part of the normal care chain.

> *"Of course we advised a lot, but we also made the geriatric specialist collaborate with the GPs. We could make them experience what the added value of this care is. And that works more properly for innovation that is so invasive in the daily practice."* (Respondent 5, advisor)

In a project in which the applicant was a parent organisation, both the advisor and applicant visited the five practices of the organisation multiple times to help them implement the innovation. They started the project in collaboration with two professionals at the different locations. Once the innovation was accepted and workable for those professionals, the method was shared with other professionals of the practice.

> *"Because we notice that you need to visit them continually. First, that enforces them to take action. Second, you can also adjust to the different practices ."* (Respondent 16, applicant)

[1] Regionale Ondersteunings Structuur (ROS). Since the foundation by the Ministry of Health, Welfare and Sport in 2005, the ROS plays an increasingly important role in primary care. The ROSs exist to accompany regional innovations and to enhance the quality and continuity of primary care, by increasing the collaboration between health professionals. Increasingly, different domains of healthcare are involved in the collaborations, which increases the integration of patient care (ROS netwerk, 2016).

Another advisor made the applicants of her project a candidate member of her own network to demonstrate how a network can be organised. Both applicants could experience all activities that were organised in the network. One of the two applicant parties eventually became a definite member of the network of the advisor.

4.4 Products

Another element of the MKB model to measure impact is the development and use of products. In this section, the products that were shared with the applicants as well as the products that were developed by the applicants will be discussed. The developed products were both quantitatively as qualitatively measured, the shared products were only covered in the interviews.

In the questionnaire, a question was posed regarding the products that were developed or were expected to be developed in the near future. This question had 35 answer options and an option to name products that were not included in the list. Diagram 2 shows the answers to this question. The mean number of products that were or would be yielded per project is 4.5, ranging from 0 to 16 products. Most of the developed products were practical, such as the clinical pathway that was developed most.

No products were yielded in two projects, which was explained in the option otherwise. There are some products that were not yielded by any of the applicants that completed the questionnaire: scientific article, conference paper or abstract, (chapter of) scientific book, thesis, scientific presentation, adjustment insurance package, business development, commercial applications, and prices or awards.

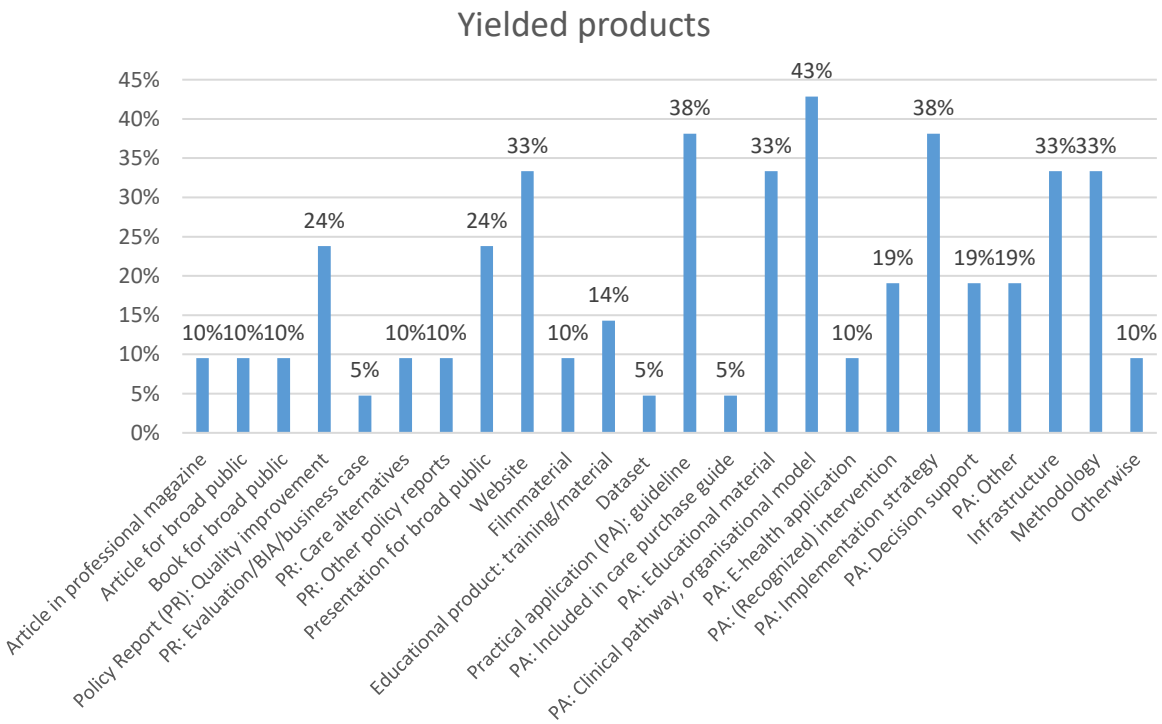

Diagram 2. Yielded products in the projects in percentages (n=21)

The interviews showed that many of the developed products in best practices were shared with the knowledge voucher applicants. These products included guidelines, action plans and formats for

collaboration. Many advisors also shared renewal in their methods with the applicants, so that the applicants were aware of recent innovations.

The sharing of products made it easier for the applicants to start their project. According to many advisors, this created a significant advantage compared with the example projects in which all products needed to be developed.

> *"They had a great advantage for that matter. They did not need to develop a lot, because they already had the documents. And I also said glance through it, adjust it to your own situation, adjust names, put your logo above it."* (Respondent 4, advisor)

In several cases, a new product was created for the knowledge voucher project, as is the case with a training that was developed in a project. Most advisors did not develop new products, but adjusted their products before they shared them with the applicants. This adjustment was often necessary to concretise the products and make them transmittable. The voucher stimulated the advisors to further develop their products and make them useful to others.

> *"Maybe a good example is not finished until it is actually transmittable, but for some of them this was not the case. So I think that the stimulus helps to make transmittable products [...] it would have not been so good developed if we did not do this."* (Respondent 10, applicant and advisor)

Because the applicants could use many documents of the example projects, it was less necessary to develop products themselves. Nevertheless, some products were developed in the projects. When comparing the number of products that was mentioned in the interviews with that of the questionnaire, it becomes apparent that the questionnaire paints a more positive picture of the number of products that were developed.

Products that were developed according to the interviewed applicants were an animation film, stepwise action plan, website, training, documents for own use and a book with best practices. Especially the three applicants that had already started the project before applying for the voucher developed many products. Two of these projects developed the products in collaboration with the advisor. In the other project the products would probably have been produced without any help of the advisor as well.

According to the applicants, the shared and developed products were used by many healthcare professionals in their organisation. In some projects, even network partners or patients used the products.

According to one applicant, the products that she developed are also applicable to a wide variety of other projects. Furthermore, she mentioned that mutual learning is desirable, and thus she shared her developed products with the example project as an enrichment of the best practice.

One advisor mentioned that she did not develop many products in the knowledge voucher project, but that she thinks it is helpful to write an article about the project to inspire others. However, this takes a lot of time to develop and she would like to receive help from ZonMw to do this.

> *"Publishing is an annoying job, at least according to me [...] for many persons it is a side job, and thus the publishing is often not done, but that is a shame. So I can imagine that ZonMw can facilitate the publishing process […] Just like you interview me right now […] in the same way you could conduct a content related interview and help in making an article"* (Respondent 2, advisor)

4.5 Collaboration

Another interaction of the MKB model is the collaboration that occurred during or after the projects. Multidisciplinary and domain-transcending collaboration was an important objective of many projects. The collaboration during the project was measured qualitatively and the effect of the voucher on the collaboration was measured both quantitatively and qualitatively.

Collaboration during the project

The interviews revealed that the collaboration between applicants and advisors went well in most of the discussed projects. However, sometimes friction arose because the goals and expectations of the applicant and advisor were not always aligned. In one project, the advisor mentioned this as bothersome, because this led to much extra work for her.

The projects in which there were many applicants were frequently guided by more than one advisor. The advisors then distributed the tasks or projects. Besides the collaboration with other advisors, some advisors consulted colleagues of the example project for advice. Also, external parties were called in for help in guiding the project. These parties include universities, journalists, municipal health services and ROSs.

The contact between the advisor and applicant usually lasted until mid-2016. After the voucher was fully consumed, the contact often diminished. There are also a couple of projects in which the contact already stopped after an initial presentation. This became apparent in two of the ten interviews with the advisors. Conversely, in some other cases the advisory work was still persisting.

The applicants frequently organised themselves in a project group, including many professional of different disciplines from the healthcare centre as well as external professionals. The disciplines that were included in the projects groups ranged from doctors to social care workers, paramedics and pharmacists. The applicants were often the driving force behind the project groups. Besides the contacts within the project groups, many professionals started bilateral contact moments and searched for different professionals in the area to work with.

In about half of the projects, a ROS has been involved. This organisation could offer extra support to the applicants. Often, the advisors of the projects have maintained contact with the ROS for mutual knowledge exchange. Because the ROS is a more regional partner, they can easily spread the project to different locations in the region.

> *"And it is very useful to take the ROS with you along the way and in the entire development, so that they can carry on with the project locally."* (Respondent 7, advisor)

Sometimes, other parties than the ROS were interested in the results of the knowledge voucher projects as well. These parties then contacted the applicants, which resulted in a further spread of the project. These parties were frequently health insurances or other healthcare centres in the area.

The analysis of the interviews revealed that collaboration with many different professionals and organisations helps in spreading the results of the project. When different professionals were involved in the project, it aroused interest of many professionals.

Effect of the voucher on collaboration

In the questionnaire, a question was posed about the effect of the voucher on collaboration. There were thirteen possible collaboration partner options given and the participants could also answer that there were no collaboration partners or add their own response. Diagram 3 illustrates the answers that were provided to this question. The mean number of collaboration partners during the projects

was 3.4, ranging from 1 to 7 different partners. There were no applicants that reported that they did not collaborate in the project at all.

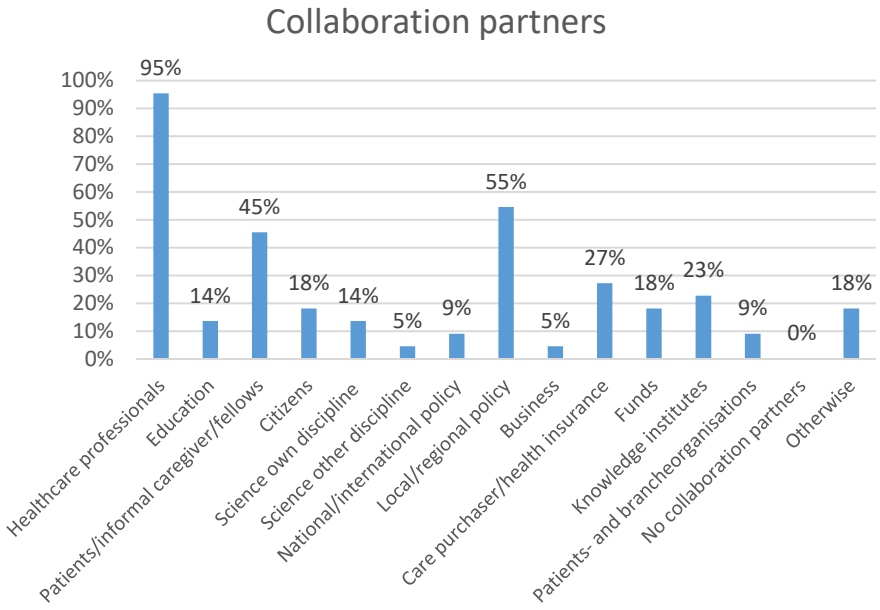

Diagram 3. Collaboration partners in the projects in percentages (n=22)

The most common collaboration partners in the projects were the healthcare professionals. However, also other disciplines were frequently mentioned as collaboration partners. In the option "otherwise" the following parties were mentioned: ZonH[2], InEen[3], Vilans[4], Rijks Instituut voor Volksgezondheid en Milieu (RIVM), Zorgbelang NL, Stroke Service Zaanstreek and the social district team. The goal of the programme OEL was to stimulate multidisciplinary and domain-transcending collaboration. According to this quantitative data, collaboration with a variety of professionals in many different fields arose.

Another question in the questionnaire revealed that the collaboration was formalised in 57% of the cases. The collaboration took place regularly: periodic consultation occurred in 81% of the cases. The frequency of the consultation varied from monthly to once a year.

The interviews provided more insight in how the collaboration was stimulated in the projects. The applicants contacted many professionals and external parties to involve in their project, which naturally led to more multidisciplinary collaboration. Parties that had never met each other, suddenly discussed their working methods together. This exchange led to eye-openers for both parties.

> *"The gathering at Van der Valk was a start, from which you get to know each other and automatically start making decisions together"* (Respondent 12, applicant)

Most applicants reported that the collaboration has significantly improved because of the voucher project. The collaboration partners they mentioned are diverse and include many different professions. The data are similar to the data of the questionnaire.

[2] ZonH is a ROS in the province of Noth Holland
[3] InEen is an organisation that offers support to healthcare facilities in primary care. It stimulates collaboration to achieve patient-centred care of a high quality. InEen offers assistance to increase organisational performance and implementing innovation (InEen, n.d.).
[4] Vilans helps professionals in long-term care to innovate and stimulates collaboration of healthcare professionals in a network. Vilans' main clients are municipalities, healthcare organisations, educational organisation and health insurances (Vilans, 2016; Vilans, n.d.).

The voucher did not solely stimulate formal collaboration moments, such as structural gatherings, but also informal contacts. Professionals contacted each other after the formal gatherings, which stimulated mutual consultation and knowledge exchange. Some applicants reported that they had already worked with some of the professionals in the past, but that this collaboration had gradually diminished, and was stimulated again by the voucher project.

In one applicant interview, it became clear that the collaboration has improved during the past years, however, not solely due to the project. According to the applicant, the influence of the voucher on the collaboration has been small. Two other applicants reported that the collaboration has not improved because of the project. One of these applicants stated that the project has not changed anything in the collaboration. However, according to the applicant, stimulating collaboration was not the goal of their project. At the other location, the applicant reported that the collaboration has not improved because the project stagnated. In this project, the professionals were enthusiastic about the collaboration and the establishment of a network. However, because of a lack of resources of the hospital, it was not possible to continue the project. This unfortunately resulted in a dilution of the contacts between the professionals.

For the advisors, it was much more difficult to provide information on the effect of the advice on the collaboration because many advisors did not know the current situation of the applicant. However, most of them noticed improvements in the collaboration during the projects.

4.6 Financing

The final element of the MKB model includes the financing sources that the project has obtained. Sources to finance the project are a good sign for the structural continuance of the project. First, the co-financing during the projects will be discussed and then the follow-up financing. The financing was measured in the questionnaire as well as in the interviews.

Co-financing

In the questionnaire, a question about co-financing was posed that had twelve different answer options and an option “no co-financing” and “otherwise” for different sources. The co-financing could be in hours as well as in cash. The mean number of co-financing sources during the projects was one, ranging from 0 to 4. The different co-financing sources can be found in Diagram 4. The co-financing consisted in most cases of healthcare professionals, healthcare practices and local policy. In eight of the 21 cases, no co-financing was obtained.

None of the projects received co-financing from education, science, national or international policy, and business. The most frequent source of co-financing was local or regional policy. In the option “otherwise” the following co-financing sources were mentioned: healthcare professionals, ZonH, GP group, integrated primary care (Geintegreerde Eerstelijns Zorg: GEZ[5]) resources.

[5] The GEZ budget may be spent on staff, organisation and infrastructure to finance collaboration initiatives in primary care (Menzis, 2016).

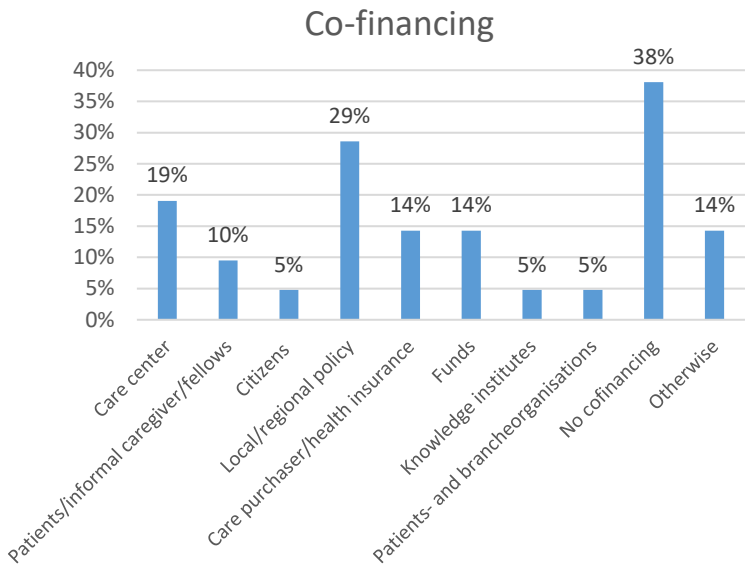

Diagram 4. Co-financing sources in percentages (n=21)

The interviews showed that many advisors invested more time in the project than the 100 hours that the voucher offered. In general, this was not considered as a problem. Only in a couple of projects, there were some hours left of the voucher.

> *"The voucher is worth a certain number of hours, so we can offer that many hours of guidance. If we exceed this number than that is no problem to us, because it is our job to guide people."*
> (Respondent 4, advisor)

In many projects, a couple of hours of the voucher were spent on another advisor or a local organisation. That person or organisation was often consulted by the advisor because of his or her expertise on a specific topic. This consultation was often a complementary to the expertise of the knowledge voucher advisor.

In one project, the ROS received half of the budget, which was requested by the applicant. In another project, the advisor outsourced the advisory task to a colleague, who she assisted in that task. Furthermore, one project spent the total budget on a geriatric specialist. The additional hours that the advisor invested in the project were paid with own resources.

In addition to the advisors, the applicants also invested their own hours in the project. Taking the lead in the projects and organising the professionals took quite some time for the applicants. Many applicants reported that it was difficult to find this time. They would have preferred to receive part of the voucher budget themselves. However, for about half of the interviewed applicants, some hours were covered by resources of their organisation or the GEZ budget. The advisors added to this that, despite the difficulties in finding the time to participate, the applicants and other professionals were often willing to invest time in the project.

The vouchers did not offer a possibility to cover the costs for hiring a location for trainings and presentations because no other costs than advisory hours could be invoiced. Several solutions to this were mentioned in the interviews: in one project the advisor paid for the location herself; in a couple of other projects the location was made available by the applying organisation.

Follow-up financing

The question about follow-up financing in the questionnaire provided thirteen different answer options and the options “no follow-up financing” and “otherwise”. The answers to this question can be found in Diagram 5. The mean number of follow-up financing sources that was found in the quantitative data was 0.8, ranging from 0 to 3. Although most projects were local initiatives, which are often not able to obtain follow-up financing, follow-up financing was obtained in more than half of the projects. The most frequent follow-up financing source was funds. None of the project gained financing from education, patients and informal caregivers, citizens, science, and patients- or branch organisations.

Ten of the 21 applicants did not receive follow-up financing. One of these ten participants selected the option “otherwise” and explained that no follow-up financing was obtained yet. Other answers in the option “otherwise” were that it was unknown to the participant whether follow-up financing was obtained and that the GEZ resources were used as a financing source.

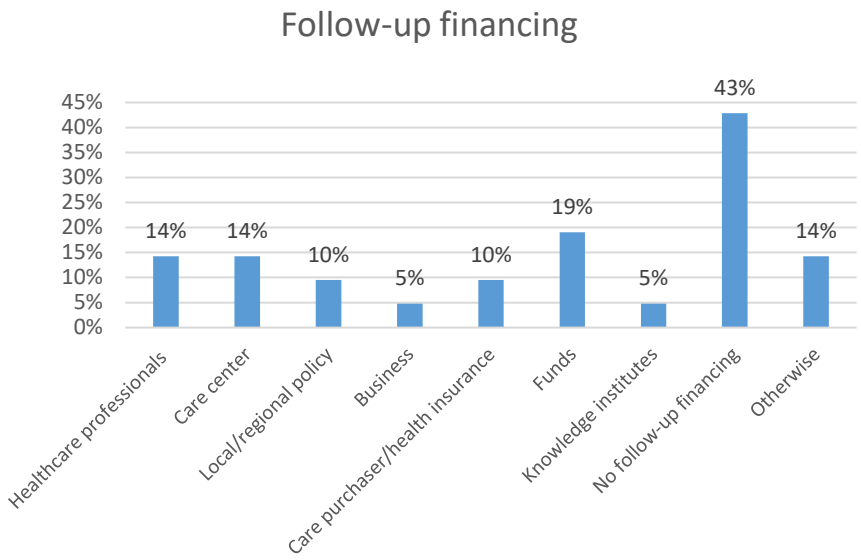

Diagram 5. Follow-up financing sources in percentages (n=21)

The interviews showed similar results to the questionnaire. In most interviews, the follow-up financing was only discussed with the applicants of the voucher because many advisors were not involved in the projects anymore. Seven out of the eight interviewed applicants reported that they tried to obtain follow-up financing for their projects. For many projects this was difficult to find. However, only one of the interviewed applicants reported that he did not succeed in finding follow-up financing. This interviewee mentioned that the financing was rejected because the project was not innovative enough according to the health insurance company.

> *“We tried to obtain financing, which was rejected […] A multidisciplinary consultation is of course not innovative, it is not the first time that it is established […] therefore you cannot get any funding anymore.”* (Respondent 13, applicant)

In most cases, the financing that was obtained, was for a demarcated part of the project. In contrast, two projects already obtained structural financing. The interviews showed that projects do not necessarily need to be well-advanced to obtain external funds. For example, one project that was still in the beginning phase of the execution received a large budget from a health insurance company.

The analysis of the interviews identified some factors that helped in the allocation of external funds. Collaboration with many professionals and parties in the project stimulated funding organisations to join the project. When many professionals were working on the same project, this was seen as a pressing issue for the funding parties. Furthermore, funds were more often granted to projects that involved many professionals because this increased the support of the project.

4.7 Results of the voucher

The four sub-questions of this research have been discussed in the previous sections. This research aimed to get a full insight in the impact of the knowledge vouchers and in how the voucher can be improved in the future. Therefore, the results, the effective elements of the voucher, and considerations for improvements will be discussed in the next sections.

In the questionnaire, a question was posed about the realisation of the objectives. This question was asked to gain insight in the progress of the projects. The participants could choose from four answer options: completely realised, partly realised, not realised and otherwise.

The answers that were provided to this question are presented in Diagram 6. The most frequent selected answer to this question was that the objectives were partly realised. In many projects, the work is still in progress and many projects have not obtained definite results yet. 9% of the participants answered "otherwise" to this questions. One participant explained this choice by mentioning that their network was still in development and another expected to be finished at the end of 2017.

A follow-up question about the realisation of objectives was asked to the participants who answered that the objectives were partially realised. To the question what happened in the project, 36% of the participants answered that the collaboration has improved, 29% that a time planning has been made and 21% that activities have been planned. The options "approved budget" and "study question/task setting" was chosen in 7% of the cases. The option "intended results" was not chosen by any participant.

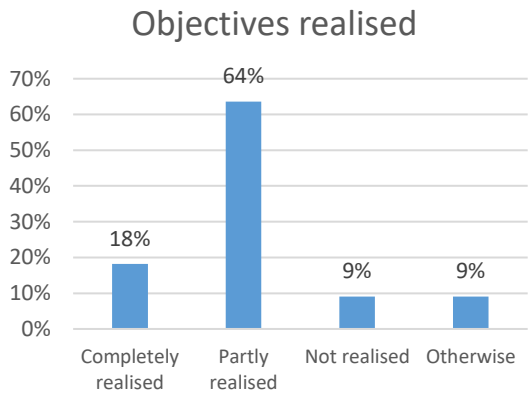

Diagram 6. Objectives realised in percentage of the projects (n=22)

Because the question about the objectives did not provide enough insight in the actual results of the projects, the questionnaire included another question about the perspectives of the applicants on the results of the projects. There were six different results possible and the participant could choose for the option "no results" or "otherwise". The answers to this question are shown in Diagram 7.

The mean number of results that were mentioned in the questionnaire was 1.6, ranging from 0 to 4 different results. Many healthcare professionals reported that they believe the quality of care has improved because of the voucher. This does, however, not mean that the quality of care has indeed

improved, because a formal assessment to the quality of care was not necessary. Only one person mentioned that the project resulted in new evidence.

No participant in the questionnaire selected the option “no results”, however, in the option “otherwise” three applicants explained that there are no true results yet. Another respondent mentioned less pressure on healthcare professionals as a result.

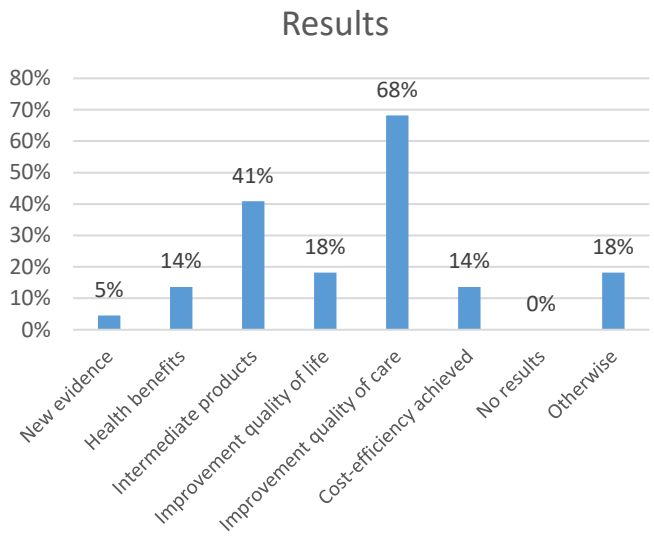

Diagram 7. Results of the projects in percentages (n=22)

When indicating to whom the results are relevant, many different parties were selected in the questionnaire. The parties are displayed in Diagram 8. The mean number of parties that was selected is 4.4, ranging from 0 to 12 parties. Most participants in the questionnaire believed that the results are most relevant for healthcare professionals. However, the options “patients/informal care givers”, “local/regional policy” and “health insurances” were also frequently selected.

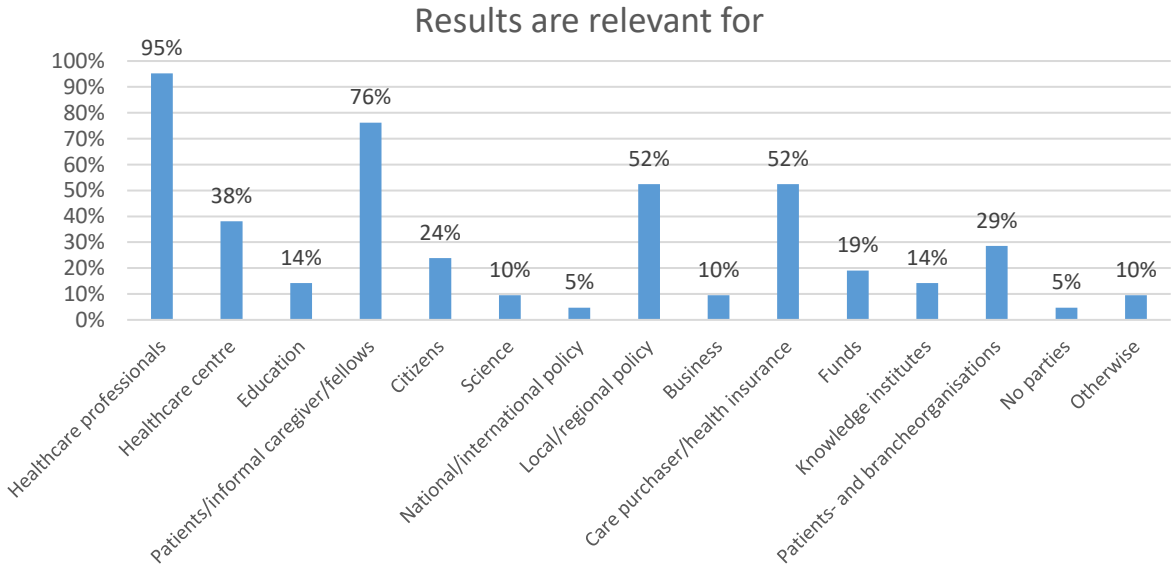

Diagram 8. Parties for whom the results are relevant in percentages (n=21)

The realisation of objectives and the results of the projects were also covered in the interviews. A common reaction of the applicants about the effect of the voucher was that it exceeded their expectations.

Many projects set pragmatic goals in the beginning of the project. A common goal in the projects was to gain knowledge on the best practice. This happened in all discussed projects. However, the greater purpose of many projects was to improve multidisciplinary collaboration. Many applicants reported this in the interviews as the most important result of their project. An improved collaboration was regarded as an "intermediate product" in the questionnaire, but was not the most frequent selected result in the questionnaire.

In three of the eight interviews with applicants, it was mentioned that a formal evaluation has already been performed with the healthcare professionals. These evaluations showed that the induced collaboration was being appreciated. However, the applicants reported that it was much more difficult to measure whether the patient have noticed a difference in the care. In none of the projects this has been formally evaluated. Nonetheless, two applicants reported that they heard positive experiences of their patients and that they observed improvements in the health outcomes of their patients.

> *"At a certain moment you think it is not such an issue in the practice anymore, how is that possible? […] But then you notice that the SOLK patients are treated so accurately different, that this decreases the pressure [...] In two (of the five) practices this is already the case."* (Respondent 16, applicant)

Unfortunately, the knowledge voucher has not resulted in the desired effects in every project. As previously mentioned, in one of the eight projects that were discussed with the applicants, the project stagnated.

It is much more difficult to extract data on the results of the projects from the interviews with the advisors because of a lack of knowledge on the current situation of the applicants. In one interview with an advisor, it became clear that after an initial presentation, the applicants gave priority to another problem and the two knowledge voucher projects stagnated.

> *"If you look at the continuation, in Groningen they have proceeded themselves. After the gathering there was not a very concrete continuation […] In Tilburg […] at one moment it stagnated there because they made different choices"* (Respondent 6, advisor)

It was frequently mentioned in the interviews that the result of the project would not have been achieved without the knowledge voucher. An initial subsidy, such as the knowledge voucher, to start the project and involve professionals is important for projects to succeed. The applicants reported that they would not have hired an external advisor themselves, because €10.000 is too much money to invest in a project.

4.8 Effective elements of the voucher

In almost every interview, with applicants as well as advisors, it was mentioned that not having to re-invent the wheel was a positive element of the projects. The advisor had already experienced what works in in practice in an earlier project. Therefore, the advisor could offer proper guidance and share tips and tricks with the applicants.

Most applicants and advisors reported that the external and independent advisor is an important success factor of the projects. Because of their enthusiasm, the advisors could easily distribute their

vision. Furthermore, the interviewees mentioned that the external advisor could connect different professionals. The autonomous role of the advisor stimulated other professionals to join the project and to make quick progress. The applicants mentioned two reasons for this stimulation. First, the advisor is seen as an expert, from whom the professionals can learn a lot. Second, the professionals acknowledge that hiring an advisor is a precious affair and thus valued the advice more.

> *"Now we just had a stimulus because we knew it is a precious affair, but also a professional person. We were in good hands, and that felt good after the first conversation."* (Respondent 13, applicant)

According to one advisor, sharing knowledge and offering steps to change increases the confidence of participating practices in the innovation. Although implementing innovation is always difficult, these steps trigger professionals to start the implementation.

> *"It is actually really simple, change in healthcare, everyone thinks it is difficult. Also pilots find it hard to do something, but by sharing knowledge and steps you get some confidence […] and that is how it works, then things will happen"* (Respondent 7, advisor)

Another advisor reported that the voucher was effective because it provided the opportunity for the project managers of the best practices to spread the results themselves, without an intervening organisation. In this manner, the project managers are appreciated more. Furthermore, the advice is effective because of the enthusiasm of the advisors and the direct transfer of knowledge. Conversely, not all project managers are immediately able to serve as an advisor. Sometimes the project managers need some support in spreading their example project.

Applicability of the advice

In most cases, the situation of the applicants was not comparable to that of the best practice. For instance because of population differences, different organisational working forms or even because of the differences in expectations. Therefore, the advice often needed to be adjusted to the situation of the applicant. The interviews with both the advisors and the applicants showed that the advisors were able to accommodate to the applicants. This accommodation to the situation of the applicants was regarded as an important success factor of the voucher.

The initial contact with the applicants helped the advisors to set specific goals for the applicants. The adaptation to the new location was, nevertheless, something that took the advisors a lot of time. There were a couple of cases in which the situation of the applicant was completely different from the best practice, which hindered the execution of the initial plan of the advisor. This often occurred when the applying organisation was very different from the best practice. The following quotation illustrates such a situation:

> *"We just thought that we would implement a care programme, but then we found out that they (the applicants) were physiotherapists […] Therefore, we could not execute that programme, because you need collaboration with the GP for that "* (Respondent 2, advisor)

Most applicants also reported that they thought the advice was applicable to them, although the situation was not completely the same as the best practice. Some applicants even reported that they had no idea what the approach of the best practice had been and that the advice was therefore completely applicable to them.

"Of course it is possible to extrapolate it to an old neighbourhood. We are not exactly the same as a village […] but you can still deduce something from it, use what they used in that situation" (Respondent 13, applicant)

4.9 Improving the process

The interviews revealed possible improvements to the application process for the voucher. First, the timing of the call was not well planned according to many applicants. The call was in summer, when many healthcare professionals were on vacation. Some applicants could not discuss the application with their colleagues or even almost missed the call. Second, many applicants found out about the vouchers by accident, which indicates that the PR of the vouchers should be improved. Third, some applicants experienced difficulties in the application. One applicant applied for four different projects before he succeeded in the application process the fifth attempt. This was mainly due to a lack of information on ZonMw's website. For instance, it was not clear on the website whether the advisor still accepted applicants and whether the advisors had set certain requirements for the applicants they wanted to accept. Hence, the communication process can be improved.

Another issue concerning the process is the allocation of the voucher to the applicants. The applicants needed to pass the vouchers along to the advisors. Most interviewees did not regard this as a problem, only as an administrative action. However, two of the interviewed advisors mentioned that it would be better to grant the voucher directly to the advisor. One of these advisors stated that the project slowed down because the voucher was allocated to the applicant. He would have preferred to have more control over the budget.

"You can consider ZonMw paying the project leaders directly […] because now ZonMw lost all control, and as a project leader you do not have any control as well." (Respondent 4, advisor)

In another interview, however, an advisor reported an advantage of granting the voucher to the applicant. The advisor stated that in this way, the applicant is committed to make the project to a success because the hours of the advisor can only be invoiced if they are properly spent.

Another discussion point concerning the budget was the lack of budget for the applicants, which was an obstacle to them. According to many interviewees, it is easier if the applicants receive part of the budget to invest according to their own wishes.

"At locations that do not have their own resources to reimburse the hours of the healthcare professionals for the time they do not invest in care […] at those locations, I think you should elaborate the voucher with a part to invest in their own healthcare professionals" (Respondent 5, advisor)

Although many interviewees reported that they preferred a part of the budget for their own organisation, there is also a disadvantage to this. As was mentioned before, a lot of co-financing in hours occurred in the projects. The current form of the voucher stimulates to search for own resources to finance the hours of the professionals, and this is much more sustainable than allocating part of the budget to the applicants.

4.10 Increasing the impact of the knowledge voucher

Both the applicants and advisors offered several suggestions to increase the impact of the knowledge vouchers. Additionally, the analysis of the interviews revealed elements that can help increase the impact of the projects. The options to increase the impact of the projects will be discussed next.

Selection of best practices

A proper selection of the best practices is important. The current best practices were selected by two healthcare professionals. One applicant and one advisor reported that more healthcare professionals should be involved in the selection process of the best practices in the future. This bottom up selection should make sure that the selected projects serve the most urgent issues in the healthcare practice.

> *"The selection of which projects are offered should correspond to the urgency in the field. An analysis is necessary for this, and you can also use the project leaders and stakeholders for this via a knowledge gathering for example."* (Respondent 1, advisor)

Furthermore, an advisor reported that she thought the example project was not advanced enough to serve as a best practice. According to her, a proper network of professionals should be available to spread the best practices successfully. This network can create a platform for the project. When the applicants then join this network, there is more control over the implementation of the project. Furthermore, mutual knowledge exchange can occur, leading to better results for both the applicant and the advisor. The following quote illustrates her thoughts about when the knowledge voucher might be helpful:

> *"The knowledge voucher is a manner to find out whether you can implement the intervention nationally. But that is a one-time thing, and that does, according to me, not contribute to the true implementation in an unambiguous way […] It is especially useful to provide these things (knowledge vouchers) at the moment that there is already enough support from different parties in the country […] then this kind of impulses can be helpful."* (Respondent 8, advisor)

Moreover, the type of project needs to be taken into account in the selection process. The type of project appeared to be of influence on its probability of success. Some advisors reported that the implementation of a new ICT application is much more difficult than starting a network of professionals. Some projects might require a complete different approach, and the knowledge voucher might be less appropriate for complex projects.

Selection of applicants

Besides the selection process of the projects, the selection of the applicants was a discussion point for some applicants. The applicant that suggested to organise the selection process of the projects more bottom up, also mentioned that it is often the same group of professionals who apply for the available subsidies. If a professional knows where and how to apply for a subsidy, he or she has an advantage compared with other professionals. This leads to an unfair allocation of subsidies, and to subsidies that do not necessarily end at the locations where they will be used best.

Advisors also mentioned the importance of the selection of applicants. A couple of advisors mentioned that in some situations the projects could not start right away because of the limited selection process of the applicants. For instance, in one project the starting situation of the example project was very different to that of the applicant. Therefore, a strategical analysis was necessary before the project could start. This led to unexpected delays in the project.

The analysis showed that the type of organisation of the applicant did not matter for the successes of the project. All sorts of organisations were successful in achieving their goals and in continuing the project themselves. However, it appeared to be an advantage in the process if the applying organisation already had a lot of contacts with other organisations and professionals, as this facilitated the collaboration. Furthermore, the expectations and objectives of the applicants could not be linked to the results of the projects. The applicants that had different expectations than the advisors did not show worse results than the project in which the expectations were shared. Therefore, a selection on the motivation to participate is probably not helpful to improve the impact of the projects.

Structure in the project

Another point that was frequently discussed in the interviews is the format in which the knowledge voucher is delivered. Many advisors reported that the voucher should not become too restricted, because the process of the project cannot always be predicted in advance. Flexibility is necessary to make projects successful because every project is different, and there is not a vast format that works in every project. Conversely, some interviewees reported that structure was missing in the project. One applicant mentioned that there was some ambiguity among the participating professionals because no year planning was available in the beginning of the project. This quote illustrates her desire for more structure in the project:

> *"So that you can say to the practices it looks like this, this many gathering, in which this is going to happen. Because we noticed […] that people need support in the structure."* (Respondent 16, applicant)

Moreover, many applicants reported that they were surprised that the results of the project did not need to be reported to ZonMw. Most applicants regarded a feedback moment as a logical requisite. An advantage of frequent feedback moments is that this might prevent projects from stagnating.

> *"Maybe more often feedback to you […] because I think that you (ZonMw) provided the vouchers, but actually have no idea what happens."* (Respondent 12, applicant)

Duration of the project

For some of the projects, the running time was a stumbling block. In the beginning, the participants were told that the projects had a running time of half a year. However, for many projects this was much too short. Many projects received permission to continue their project for a longer period, which was appreciated by the applicants.

One advisor reported that the advisory track does not necessarily take a long time, however, a proper moment should be awaited to start the project. Therefore, the time span to execute the project should be flexible. Nevertheless, several advisors also reported that a demarcation of the project is also necessary to keep the pace in the project.

Local and regional knowledge exchange

Two interviewed advisors reported that it is an advantage if the applicants were located close to the example project. Moreover, two other advisors mentioned that proximity of the different applicants is an advantage. Especially when the establishment of a network was the goal of the project, this enabled professionals to get in contact with professionals in the area and to exchange knowledge.

In two interviews, with an applicant as well as an advisor, a desire appeared to organise a gathering with all the applicants of one project at the end of the voucher project, in order to learn more from each other. According to a few interviewees, the mutual exchange of knowledge was missing in the projects and the exchange of knowledge was primarily one-sided.

Success factors of projects

It proved to be difficult to draw conclusions on the factors that influenced the success of a project because the projects differed a lot from each other in many ways. However, some factors could be identified that contribute to the success of a project. These factors can be stimulated in the future, to further enhance the impact of the vouchers.

First, many successful projects had a long lasting guidance of the advisor. Most projects that only provided one training or presentation stagnated. Nevertheless, according to one advisor, the advice consisted only of a presentation, a conversation with a group of professionals and some support at distance, and these projects were still successful.

Second, if there are enthusiastic professionals who take responsibility for the project and reserve the energy in the project, this helps to make the project successful. Whether this person is the advisor or applicant of the project did not seem to matter.

Third, collaboration with many professionals and organisations from the beginning of the project appeared to help in pursuing the project. Involving different professionals in the advisory track stimulated the collaboration at the end. Also, in this manner, the results of the projects can be spread to other parties. Especially the ROS is an organisation that can support the project and is important in spreading the project regionally.

5. Conclusion and discussion

This chapter will discuss the findings of this study and relate them to the wider context. First, the main findings of this study will be discussed and related to the existing literature. Then, possibilities to enhance the impact of the vouchers, and implications for the quality of care and the SIAMPI and MKB model will be covered. This chapter concludes with the strengths and limitations of this study, and the recommendations for policy and further research.

5.1 Answer to research questions

The knowledge voucher was an experiment of ZonMw to increase the impact of the programme OEL. However, insight in whether the knowledge voucher is a proper instrument to achieve societal impact was lacking. Therefore, the objective of this study was to make recommendations to ZonMw on how to improve the knowledge vouchers by evaluating the societal impact of the vouchers on the participating practices. To meet this objective, four sub-questions were formulated based on the MKB model. In this section, the four interactions and their productiveness will be discussed. Then, a conclusion will be provided on the societal impact of the vouchers.

The first sub-question of this study comprised the dissemination and application activities during and after the projects. The analysis of the data showed that many activities were organised in the projects. In general, many professionals were involved in these gatherings. The gatherings during the projects were often organised by the advisor. Most applicants started organising these meetings themselves structurally.

The second sub-question involved the yielded products in the knowledge voucher projects. The analysis showed that there were many documents shared with the applicants that were often adopted by the applicants to make it usable for their own practice. However, this sub-question was initially more directed to the development of products than to the sharing of products. Even though many documents were shared with the applicants, some new products were developed during the projects as well. Many of these products were developed in collaboration with the advisors of the project. Most of the shared and developed products have been used locally by the professionals themselves.

The third sub-question regarded the collaboration that was initiated during the projects. Stimulating collaboration was an interaction of the MKB model, but also an important objective of the knowledge vouchers. It can be concluded that in most projects the knowledge vouchers have stimulated multidisciplinary collaboration between care professionals a lot. By organising gatherings with many professionals of different disciplines and domains, the collaboration started naturally. In most of the discussed projects, it became apparent that this collaboration is persistent.

In the final sub-question of this research, the financing of the projects was analysed. Although the interviewees reported that it was difficult that the voucher did not cover hours of the applicants, this format stimulated the search for co-financing sources. Besides the many different co-financing sources that the projects have found, many projects have also obtained follow-up financing. A couple of projects have even managed to find structural follow-up financing. The high number of follow-up financing sources was not expected at the beginning of the projects because many projects were small-scale implementation projects that were not very innovative and thus less interesting to health insurance companies.

In conclusion, many different interactions have occurred in the discussed projects. Most interactions could be observed in the collaboration category. An explanation for this is that most

projects were especially targeted at stimulating collaboration. The category with the least observed results was the products category because few new products were developed. Nevertheless, many products were shared with the applicants and adjusted to their practice. When regarding these shared and adjusted documents as products as well, the category products delivered much more results. Therefore, it can be concluded that in all four categories interactions have occurred.

Interactions are only meaningful if they are productive. As previously mentioned, an interaction is productive if it leads to efforts by stakeholders to apply the results of the project and thus to behavioural change (Spaapen et al., 2011). In most projects, the interactions have been productive because many professionals have used the results of the best practices and have structurally changed their manner of working. Therefore, according to the SIAMPI approach (Spaapen et al., 2011), it can be assumed that the projects have led to societal impact.

5.2 Explanation of findings

To understand the results of this research, it is important to reflect on possible explanations for the findings. This section will first pay attention to the differences in qualitative and quantitative data. Then, some explanations for the impact of the vouchers will be discussed.

Explanation of differences in quantitative and qualitative data

When comparing the data of the qualitative and quantitative part of this research, it becomes clear that this data correspond a lot. The qualitative data provided nuance and context to the quantitative data. There were also a couple of situations in which the qualitative and quantitative data were different. A clear example of a difference in the qualitative and quantitative data is the development of new products. According to the questionnaire, the applicants developed many new products during their projects; this number was higher than in the interviews.

There are several explanations for this high number of products. These explanations are derived from the eight questionnaires that the researcher completed together with the interviewee. These questionnaires were compared to the corresponding interviews.

A first explanation is the possibility that the applicants selected products in the questionnaire that would have also been delivered without the knowledge voucher project. In one of the eight cases, this was the most likely explanation for the high number of products, as the interviewee mentioned that the voucher was only a small part of the entire process. The other interviews with the applicants indicated that the products were developed by the applicants themselves or in collaboration with the advisor of the best practice. Therefore, another explanation needs to be provided for the high number of products in these cases.

A second explanation for the higher number of products in the quantitative data than in the qualitative data can be the open attitude of the researcher in the interviews. In the interviews, the applicants might not have thought of the products they developed because the researcher did not name all possible products. When the applicants then observed the answer options of the questionnaire, they could select more products than they thought of themselves. In this way, the number of developed products could have turned out higher in the quantitative than in the qualitative data.

A different finding about the products is that some products in the list of the questionnaire were not developed by any of the projects. There is a logical explanation for this finding. Most of these products are scientific products, whereas the projects were more practice based. It is plausible that practice based projects will not develop many scientific products, as this requires a complete different

approach. This might also explain why few projects resulted in the production of new evidence, according to the questionnaire, since implementation projects are not likely to develop new evidence

Another notable finding from the questionnaire is that the most frequent named result of the project in the questionnaire was an improvement in the quality of care, whereas the interviews suggested that the results were more in the direction of intermediate products, namely an improved collaboration. Perchance the questioning in the questionnaire had an influence on this difference, as the applicants might not recognise collaboration as an intermediate product.

Explanation of the impact of the vouchers

The data of the interviews with applicants and advisors were similar and complementary. Often, the advisors did not have insight in the current situation of the applicants. Therefore, they could frequently not answer the questions about the societal impact of the voucher on the participating practices. In one case, in which both the advisor and applicant were interviewed, a different view on the impact was discussed by the advisor than the applicant. The advisor was positive about the impact of the project because the situation was promising when she last contacted the applicant. However, the project stagnated after this final contact, causing the applicant to have a different view on the impact of the project. This situation is expected to be an exception because most advisors did not comment on the impact of the project if they had no contact with the applicants anymore.

The impact of the knowledge vouchers that was found in this study was larger than expected from earlier knowledge voucher initiatives at ZonMw. Although those initiatives were not formally evaluated, the general thought was that a knowledge voucher can only play a limited role in increasing the impact of a programme. Therefore, explanations were sought for the high impact that this study found.

First, there is possibility that the interviewees provided socially desirable answers. Both the applicants and advisors could have had an interest in this research because the outcomes might influence the future allocation of knowledge vouchers. However, there are some factors that diminish the probability of socially desirable answers. A first factor is that the interviewees knew that the data were anonymised, which probably helped to get true insight in the projects. This is supported by the both positive and negative experiences that the interviewees shared with the researcher. Another factor that diminishes the likelihood of socially desirable answers is the independent role of the researcher in this evaluation. The researcher often explained that she does not have influence on the future allocation of funds. A final factor is the approach of this research in which both the advisor and applicant of many projects were interviewed, which verifies the provided answers.

Second, the approach of the knowledge vouchers in the programme OEL was different from previous approaches, which could have led to the greater impact of this voucher. An important factor is that the best practices of the programme OEL were selected on their implementation possibility. This could contribute to the success of the spread of the best practices.

5.3 Enhancing the impact of the knowledge voucher

The greater goal of this study was to enhance the societal impact of the knowledge vouchers for future use. This study revealed several manners to enhance the impact of the vouchers. The suggestions for improvement will be discussed per relevant stakeholder group, after which they will be compared to the literature.

Improvements to the knowledge voucher

It is important that the applicants of the voucher are willing to invest time and effort in the project. To reimburse the invested hours, the applicants should start searching for financial support in time. Furthermore, the establishment of a multidisciplinary project group with enthusiastic professionals in the beginning of the project is important to ensure the project's success. Besides this project group, the applicants need to engage many other professionals in their project from the beginning.

It is recommended that the advisors encourage the applicants to involve their own network in the advisory track in an early phase of the project. The applicants and other involved professionals should then be stimulated to gradually take over the tasks of the advisor. Long lasting involvement of the advisor in the project helps to make this possible. Furthermore, an advisor can stimulate knowledge exchange by connecting different applicants.

For supporting organisations, for instance the ROS, it is advantageous to get involved in the project as soon as possible. In this manner, the supporting organisation can learn from the advice of the knowledge voucher advisor and distribute this knowledge to new locations.

It is important for ZonMw to adjust the format of the knowledge voucher for future use. First, the selection process of the best practices needs reconsideration. More professionals should be involved in the selection process. Once the projects are selected, more attention can be paid to the advertisement of the knowledge vouchers in the care sector. Although the intention of the voucher was to be easy accessible, ZonMw can consider a more elaborate selection of the applicants to make sure the appropriate applying organisations are selected.

ZonMw could offer more guidance during the projects. Collaboration with supporting organisations can help in providing this guidance. Guidance could be organised in the form of frequent feedback moments to stimulate projects to keep running. However, the freedom that the voucher provided to the applicants should remain. This freedom enabled the applicants to adjust the best practices to their situation to deal with pressing issues in their practices. Moreover, ZonMw should be flexible in the running time of the projects. The time span of projects can be diverse, and a longer time span increases the likability of success. At the end of the projects, a gathering with different applicants should be organised to stimulate knowledge exchange and to enhance the impact of the projects even further.

Effective elements and improvements compared to literature

The factors that were described above corroborate a lot to the findings in studies on the scaling up of innovations in a sustainable matter (Simmons, Fajans & Ghiron, 2007; Greenhalgh et al. 2004; Ploeg et al., 2014). In 2014, a study was performed to assess the spreading and sustaining of best practices for home care of older adults (Ploeg et al., 2014). This was a grounded theory study that resulted in the development of a model that explains the phases of the spread of best practices. The phases that the model consists of are committing to change, implementing on a small scale, adapting locally, spreading internally and disseminating externally. It is interesting that, although no clear format was used for the implementation of innovation in the knowledge voucher projects, these phases were completed in most of discussed projects.

The commitment of the professionals to the change already happened before the start of the project because the professionals decided on the application for the best practice. After the application, the implementation often started on a small scale, with only a few involved professionals: the project group. Then, the innovation was adapted to the new location and was spread further on. There were some differences in the voucher projects concerning the scale of the spread of the

innovation. However, almost all projects started on a small scale and gradually enlarged the scale of the project. The final stage of the model is the dissemination to new locations, this phase has already been achieved in some of the projects. The similarity to this model helps understand why most of the knowledge voucher projects have been successful.

An older model to the scaling up of innovation provides more insight in the elements of the innovation process that lead to success (Simmons, Fajans & Ghiron, 2007). This model divides the scaling up of innovation in the following four elements: the innovation itself, the strategy to transfer the innovation, the user organisation that adopts the innovation, and the resource team. These four elements are similar to certain elements in the knowledge voucher project. The innovation is comparable to the best practice, the strategy to the approach of the advisor, the user organisation to the applicant, and the resource team to the role of ZonMw and the advisors. Simmons, Fajans and Ghiron (2007) describe that all these four elements have their attributes to success. As these attributes are extensive, only the most remarkable similarities and differences to this research will be discussed.

First, important attributes of the innovation that are similar in our study to the study of Simmons, Fajans and Ghiron (2007) are the type of innovation and the easiness of implementing the innovation at a different location. Some innovations are much more difficult to spread than others, such as the ICT application in the knowledge voucher projects. Therefore, the innovation needs to be assessed on the transferability. This assessment was performed for the best practices of the knowledge vouchers by evaluating the implementation possibility of the best practices. However, some of the best practices were still difficult to spread. The selection phase of the best practices thus requires even more attention.

Another important factor concerning the innovation is the observability of the innovation (Simmons, Fajans & Ghiron, 2007; Berwick, 2003). The observability includes whether the adopters can first observe the effects of the innovation at another location. Because the applicants could observe the effect of the innovation at the example location, the observability in the projects was high.

Second, attributes of the strategy of the innovation include personal contact, adaptation to local context, early involvement of members of the user organisation, sufficient time and an ongoing focus on sustainability. These factors highly correspond to the findings in our study. Our study found that adaptation to local context of the applicant is important for the success of the project. A recent report indicated that this adaptation increases the sustainability of a project (Raad voor Volksgezondheid en Samenleving, 2017). The early involvement of stakeholders was another important factor that was found in our study. This was also described by Kirchner et al. (2012). Additionally, the study of Kirchner et al. shows that stakeholders of many different organisational levels are necessary for the implementation of innovation. In our research, the number and disciplines of professionals involved in the projects could be linked to its success. Conversely, the position of the stakeholders was less relevant, as in most knowledge voucher projects only the professionals were involved and not the managers and directors.

Third, attributes of the user organisation involve the timing of implementation, effective leadership, and similar characteristics and close proximity of the user organisation. Again, these factors correspond a lot to the factors that were found in our research. Another factor that our study found, but was not mentioned in the research of Simmons et al. (2007) is the importance of a committed project group. Nevertheless, this factor was mentioned in several other studies as an important factor to stimulate change in an organisation (Brewster et al., 2015; Ament et al., 2014). The literature further indicates that it should be clear to the involved professionals who is in the lead

of the project (Ament et al., 2014). This corresponds to the effective leadership mentioned by Simmons, Fajans and Ghiron (2007). This factor was not identified in our research.

Last, attributes of the resource team are important. These attributes include effective and motivated leaders with relevant skills and a clear vision, and the ability to generate resources (Simmons, Fajans & Ghiron, 2007; Berwick, 2003). Our study found that the vision and skills of the advisor are important to the success of the project. Although the advisor was not necessarily in the lead of the project, the advisor was an important stakeholder and often fulfilled the leadership role together with the applicant. The final attribute is the ability to generate resources. In the voucher projects, it was often the applicant or the applicant in collaboration with the advisor who requested financial support. Nevertheless, the applicant could benefit from the advisor's familiarity with gaining financial support. The advisor often assisted the applicant in this bureaucratic process.

In summary, our study corresponds to previous studies on the factors that attribute to the successful spread of innovation, and extends the literature by the finding that the knowledge voucher instrument can externally stimulate the implementation process of innovation at new locations. Moreover, this study identified additional factors that stimulate successful implementation: the connection of different applicant organisations, involvement of supporting organisations, long lasting guidance of the advisor, frequent feedback moments and a knowledge exchange at the end of the projects.

5.4 Implementation versus quality of care

As was mentioned in the beginning of this chapter, the knowledge vouchers have shown to lead to societal impact because productive interactions occurred in all four domains of the MKB. This does not necessarily mean that the voucher has also affected the quality of care in the participating practices. Improving the quality of care is an important objective of ZonMw. Therefore, it is interesting to recognize the wider context of the vouchers and to consider the vouchers in relation to the quality of care.

An important point concerning the quality of care is the selection process of the best practices. The best practices of the knowledge vouchers were solely selected on their implementation potential. This selection, performed by two healthcare professionals, focussed mainly on the goals of the project, whether these goals had been met, and the sustainability of the projects (Eijssens & Konings, 2014). The effect of the best practices on the quality of care was not assessed.

Measuring the effect of a project on the quality of care is difficult (Donabedian, 2005; WHO, 2006). At the time of the selection of the best practices, it was not considered feasible to perform an evaluation on the effect of the best practices on the quality of care. The small study population and the temporality problem were important in the decision not to assess the improvements in quality of care.

Despite the difficulties in measuring the quality of care of the best practices, it is a weakness in the project that the quality of care has been disregarded. ZonMw could have put more effort in searching for manners to increase the likability that the projects would influence the quality of care. For instance, ZonMw could have adopted the working method of the Centre for Healthy Living (RIVM Centrum Gezond Leven, 2016).

The Centre for Healthy Living has developed a system to evaluate interventions on their effectiveness (RIVM Centrum Gezond Leven, 2016). The effectiveness of the interventions is assessed by a group of professionals or an accreditation committee. The interventions are then classified into

three categories ranging from well-described to effective. Besides the assessment on the effectiveness of the intervention, the interventions are reviewed on their feasibility.

A selection on the effectiveness of the best practices does not necessarily lead to a higher effect on the quality of care. However, a more elaborated evaluation might address the worries of the professionals about the selection process that were mentioned in the interviews of this study. Furthermore, it offers a first step towards demonstrating the effect of the projects on the quality of care because there is more evidence for the effectiveness of the interventions.

Although the best practices were not assessed on the quality of care, the applicants of the voucher mentioned that they have already seen an effect of the project on the quality of care. According to Donabedian (2005) there are three important dimensions in evaluating the quality of care, which are structure, process and outcome. To a certain extent, these categories overlap with the previously discussed six dimensions of quality of care of the WHO (2006). The three dimensions that have been especially targeted by the knowledge vouchers, according to the applicants, are efficiency, effectiveness, and patient-centeredness; domains that, to correspond to the process and outcome categories of Donabedian (2005).

Many collaborations were started in the projects, which has changed and improved the process of delivering care, according to many applicants. This multidisciplinary collaboration has resulted in more frequent consultation of fellow workers when encountering problems. In this manner, the professionals are better informed about their patients. This might prevent unnecessary care, leading to more efficient care.

The collaboration might have also improved the outcome or effectiveness of the care. Some of the projects involved a training, which has probably led to a bettering of the knowledge of the professionals. This might have increased the effectiveness of the care. Furthermore, a few applicants reported that they observed improvements in the health status of their patients.

Lastly, the applicants of the voucher often mentioned that the care has become increasingly patient-centred. Many projects offered help in individualising care and adjusting to the patient's needs.

Although the effects on the quality of care seem evident, these implications were not formally evaluated. For the future, ZonMw can consider to formally evaluate the effects of the voucher projects on the quality of care and on the patients in the participating practices. The six dimensions of the WHO can then be used as the cornerstones for the quality of care. For the effect on the health of the patients, the six dimensions of positive health (Institute for Positive Health, 2015) can be used, as these dimensions provide a broader overview of health from the patients' perspective. Yet, the value of this evaluation should be weighed against the desire of ZonMw to limit the required administrative activities for the applicants of the voucher.

5.5 Improving the SIAMPI method

Besides the insight in the societal impact of the knowledge vouchers, this study offers insight in the use of the SIAMPI model for assessing the societal impact of implementation projects. The usability of the model and the implications of this research will be discussed in this section.

Problems with impact assessment

The SIAMPI method aimed to overcome three common problems with impact assessment. These three problems include the missing indicators to measure impact, the attribution or causality problem and the temporality problem (Martin, 2007; Spaapen & van Drooge, 2011).

The first problem with impact assessment were the missing indicators. The SIAMPI method has provided many indicators that clearly provide insight in the societal impact of the knowledge vouchers. Hence, the first problem with impact assessment is handled properly with this model.

The second problem, the attribution problem, is partly addressed with the SIAMPI method. The focus on productive interactions enables the researcher to directly link an interaction to a certain project member. However, this research showed that even with this method, the attribution problem can emerge. This is especially the case with the projects that had already started before the application for the knowledge voucher. In this situation, it is difficult to attribute the observed interactions to certain elements of the project itself or to the phase before the project. Furthermore, sometimes products were developed in collaboration with the advisor or with help of the advisor. When this happens, it is difficult to determine whether the product is a result of the interaction with the advisor or whether the product would have been developed anyway. The advantage of the knowledge voucher projects is, however, that most projects started from the bottom. In this way, most measured effects could be attributed to the voucher.

The final problem with impact assessment includes the temporality problem. This last item is a less important problem in implementation projects than in research projects because the impact is often earlier visible in implementation projects than in research projects. Nevertheless, this research showed that most projects were still in progress after two years. The final impact of these projects was not assessable yet. The productive interactions of the SIAMPI method are much earlier assessable than the societal impact. Therefore, the SIAMPI method provides a solution to the temporality problem.

Using SIAMPI for implementation projects

Several studies have been performed that used the productive interactions as a proxy for societal impact (de Jong, Barker, Cox, Sveinsdottir & van den Besselaar, 2014; Molas-Gallart & Tang, 2011). These studies showed that mapping the process indicators helps in anticipating on societal impact that may occur in the future, but has not yet occurred at the time of the evaluation. The studies showed that this counts for several research contexts, including information and communication technologies, and social sciences.

Nonetheless, the SIAMPI approach had not been used in implementation project evaluations before. Although the SIAMPI method was expected to be appropriate for the evaluation of implementation projects, our study provided the scientific basis for this. All three interactions of the model were relevant; no new categories arose in this study. Our research indicated that the three indirect interactions of the SIAMPI model are not independent categories. All three categories are related to each other. Especially the direct interactions showed to have a significant effect on the financial interactions: the more activities that took place, the more collaboration occurred, and the more financial interactions appeared.

The indirect interactions in the knowledge voucher projects were different than previously described in the literature (Spaapen et al, 2011). The SIAMPI method acknowledges the development of products as an indirect interactions. In implementation projects, however, it is more common to share previously developed products with the user organisation than to develop new products. This

research showed that many products were shared with the user organisation and adapted to the applicant's specific situation. The sharing and adjusting of products was not mentioned in the SIAMPI report, but is also part of the indirect interactions and is important for implementation projects. This study showed that the adaption of products to the local situation helps the professionals to use the products. This finding is supported by the literature (Ploeg et al., 2014; RIVM Centrum Gezond Leven, 2014).

A difference in this research compared with the case studies of the SIAMPI report is that collaboration was the objective of many knowledge voucher projects, whereas in the case studies collaboration was regarded as an interaction that serves as an indicator for societal impact. The intention of our study was to focus on the intermediate outcomes instead of on the final impact measures. However, the final outcome was also partially assessed because collaboration is the objective of many projects. According to a research of de Jong, Barker, Cox, Sveinsdottir and van den Besselaar (2014), the emphasis of impact measurement should be on the efforts of a project instead of on the results, although that does not exclude that short-term results are also acknowledged. Therefore, it was not regarded as a problem that collaboration was an interaction as well as an outcome of the vouchers.

Usability of the MKB model

The MKB model is based on the SIAMPI model and measures the same elements as the original model. However, the MKB is divided in four interactions instead of the three interactions of the SIAMPI model. This division appeared helpful in concretising the model. The four interactions of the MKB are more easy to comprehend, and thus more useful in practice. However, this division in four elements also leads to some overlap in the interactions. In this study, the overlap was especially apparent in the "collaboration" and "dissemination and implementation activities".

Another point of consideration is the maintenance of the productive interactions of the SIAMPI model in the MKB questionnaire. The questionnaire focusses primarily on the different interactions that took place during the projects. For instance, the activities are clearly enumerated in the questionnaire. However, these interactions need to be productive in order to lead to impact. Simply depicting the four elements of the MKB is not sufficient to provide insight in the societal impact of a project. Therefore, the MKB questionnaire should pay more attention to the productiveness of the interactions. In this research, the information about the productiveness of the interactions was gained from the interviews. A mixed methods approach can thus also provide a solution to this problem.

5.6 Strengths and limitations

A strength of this study is the mixed methods approach, in which the qualitative data provided insight in the context of the quantitative data. Additionally, the involvement of both the advisor and the applicant increased the validity and reliability of the findings. Furthermore, many professionals who have a lot of experience with impact assessment were consulted in this study. This enabled the researcher to avoid common pitfalls and to ameliorate the used methods.

Another unexpected strength of this research is the approach in which the applicants completed the questionnaire themselves. This approach was different from previous evaluations that used the questionnaire, and was chosen because no final reports of the voucher projects were available. This study showed that more interactions and outcomes of the projects can be taken into account when the applicants complete the questionnaire themselves because also after final reports are written by the applicants, the project develops and new results can emerge.

The largest limitation in the quantitative part of this research is the number of participants in the questionnaire. The goal was to reach half of the applicants. Unfortunately this number was not achieved because many applicants altered their jobs during the last two years, and the contact details of these applicants were not correct anymore.

The questionnaire that was used in this study was already adapted according to the recommendations of previous reports. Nonetheless, this study still revealed some limitations of the questionnaire. These limitations were observed by the researcher when completing the questionnaire together with the applicants. A significant limitation is the ambiguity of some answer options. Especially in the question about the results of the project, the answer options were too resembling. Furthermore, there was ambiguity about when the participants are allowed to select an answer option and when not. In the current questionnaire, for instance, people could select “increased quality of care achieved” without having formally evaluated this.

The qualitative part of this study also knows some limitations. In this study, the random sample of the previous evaluation was used. On the one hand, using the existing sample was practical because the contact details of the interviewees were available. On the other hand, this might have led to a restricted view because a relatively small number of advisors and applicants were interviewed twice. However, many applicants and advisors had already reported not to be willing to participate in an interview. Therefore, there was a limited possibility to contact new interviewees.

As with the questionnaire, due to job alterations, not all the applicants could be reached. The initial goal was to reach ten advisors and ten applicants; however, the proportion turned out differently. Interviewing more advisors than applicants can be considered as a good development because this allows the discussion of more projects. However, the advisors did not always have the proper insight in the current situation of the practices. Therefore, the data on the current situation of the applicants are more restricted. Nevertheless, data saturation was reached in this study. Hence, the number and distribution of the interviewees is considered as appropriate.

Another point of consideration is the possibility of recall bias. Information was asked about several years ago, which could have led to memory mistakes and thus to less accurate data. This bias was diminished because the most important data were relatively recent data on the interactions that occurred and because the accuracy of the data could be enhanced by comparing the data of the advisor and the applicant.

A final limitation of this study includes the unsuccessful recording of one advisor interview. Fortunately, the researcher was aware of this directly after the interview, which made it possible to paraphrase the most important statements of the interviewee and use this for the analysis.

5.7 Recommendations

This study showed that with a limited amount of money, many projects were started by the knowledge vouchers that achieved considerable results. When an impulse is necessary to increase the impact of a programme, the knowledge voucher can be considered as an instrument. This insight is valuable to ZonMw for their policies in the future. Additionally, other organisations can consider the knowledge voucher as an instrument to spread best practices.

The results of this research have some implications for ZonMw’s policy regarding impact assessment and impact enhancement. Recommendations for ZonMw and for further research on this topic will be discussed next.

Recommendations for ZonMw's policy

The first recommendation to ZonMw concerns the selection of the best practices. The best practices of the knowledge voucher were not formally evaluated on their effectiveness. In the future, the best practices should first be evaluated, before spreading them to new locations because this gives more information on the possible effect on the quality of care. Furthermore, more professionals should be involved in the selection process.

Second, this study provided understanding on how to further increase the societal impact of the knowledge vouchers. ZonMw should include regular feedback moments in the projects, allow a more flexible running time of the projects, and organise a knowledge exchange at the end of the projects. Furthermore, this study showed that the interactions of the MKB are interrelated. Initial activities in the project had a major influence on the further progress of the project, for instance on the gained financing. Therefore, it might be interesting to simulate different interactions at different phases of the projects.[6]

Third, ZonMw should take action to comply with their policy goals to improve the societal impact of their programmes and to measure this impact. The knowledge voucher has shown to be an appropriate instrument to increase the impact of existing programmes. Therefore, it is recommended that ZonMw further experiments with the use of knowledge vouchers.

For the measurement of impact, ZonMw should be clear about the policy regarding impact assessment. At this moment, many different initiatives are rising to measure impact, all with a slightly different approach. A project group has been appointed to evaluate these initiatives and to find out what appropriate impact assessment measures are. This research has shown that the MKB is useful for the evaluation of societal impact. Therefore, it is recommended that ZonMw continues to use this model as the basis of impact assessment in the future. However, ZonMw should also take the limitations of the MKB into account.

In the MKB method, the productiveness of the interactions should not be disregarded. The MKB does not provide enough insight in the context of the projects, and thus the productiveness of the interactions. Therefore, a combined quantitative and qualitative approach should be executed. Additionally, some alterations are necessary to improve the questionnaire. These recommendations can be found in Appendix VI.

Besides finding an appropriate instrument to measure societal impact, it is important to come up with an impact weighing system. Such a system has been tested before, however, still knows many limitations. It is important to find a clear and unambiguous weighing system to be able to compare the impact of different projects and to eventually start setting requirements for the impact of projects. These requirements can then, for instance, be implemented in research proposals, in order to assess the potential impact of projects in advance.

Recommendations for further research

This research has shown the societal impact of the knowledge vouchers of the programme OEL. However, further research is necessary to strengthen the insights in the knowledge voucher in general and in the measurement of impact. Several recommendations for further research will be discussed.

First, this research was context-specific, which leads to the external validity of this research being low. To increase the generalisability, it is necessary to compare the knowledge vouchers of the programme OEL to other knowledge vouchers of ZonMw or, even better, other organisations. It is

[6] This is in line with the recommendations of Reijmerink and Oortwijn (2017) for responsible programming at ZonMw.

interesting to study similarities and differences between various vouchers. Taking different contexts into account helps in gaining further understanding of the effectiveness of the knowledge voucher.

One of the contexts that needs to be considered is the context of research projects. Insight is necessary in the effectiveness of the knowledge voucher in spreading the results of research projects to the practice instead of spreading best practices of an implementation programme. The knowledge voucher is more difficult to use in a research context because there is often not an advisor of a best practice to guide the applicants.

Second, the use of the MKB questionnaire needs further evaluation. This study was the first to use the applicants to complete the questionnaire instead of the final reports of the project. This might have implications for the outcomes of the questionnaire. Therefore, it should be analysed if the outcome of the questionnaire is different when it is completed by a researcher using the final report of the project or when it is completed by the applicant of the project.

Third, further research to the SIAMPI model is necessary. This study suggests that the three interactions of the SIAMPI model might be interrelated. Studies are necessary to get further understanding of the relation between the three interactions because this might have implications for impact assessment and stimulation in the future.

References

Ament, S.M., Gillissen, F., Moser, A., Maessen, J.M., Dirksen, C.D., von Meyenfeldt, M.F., & van der Weijden, T. (2014). Identification of promising strategies to sustain improvements in hospital practice: a qualitative case study. *BMC Health Services Research, 14,* 641. DOI: 10.1186/s12913-014-0641-y

Anderson, N., De Dreu, C., Nijstad, B.A. (2004). The Routinization of Innovation Research: A Constructively Critical View of the State-of-the-Science. *Journal of Organizational Behavior, 25*: 147-173.

Baggs, J.G., Schmitt, M.H. (1988). Collaboration between nurses and physicians. *Journal of Nursing Scholarship, 20*(3), 145-149. DOI: 10.1111/j.1547-5069.1988.tb00055.x

Berwick, D.M. (2003) Disseminating Innovations in Health Care. *JAMA, 289*(15): 1969-1975. DOI: 10.1001/jama.289.15.1969

Bornmann, L. (2012). Measuring the societal impact of research. *EMBO reports, 13*(8), 673-676. DOI: 10.1038/embor.2012.99

Bornmann, L. (2013). What is societal impact of research and how can it be assessed? A literature survey. *Journal of the American society for information science and technology, 64*(2): 217-233. DOI: 10.1002/asi.22803

Bornmann, L., Daniel, H-D. (2008). The state of h index research. Is the h index the ideal way to measure research performance? *EMBO reports, 10*(1), 2-6. DOI: 10.1038/embor.2008.233

Brewster, A.L., Curry, L.A., Cherlin, E.J., Talbert-Slagle, K., Horwitz, L.I., & Bradley, E.H. (2015). Integrating new practices: a qualitative study of how hospital innovations become routine. *Implementation Science, 10,* 168. DOI: 10.1186/s13012-015-0357-3

Buxton, M., Hanney, S. (1996). How can payback from health services research be assessed? *Journal of Health Service Research and Policy, 1*(1), 35-43

Canadian Academy of Health Sciences. (2009). Making an impact: a preferred framework and indicators to measure return on investment in health research. Retrieved March 9, 2017 from http://www.cahs-acss.ca/wp-content/uploads/2011/09/ROI_FullReport.pdf

Cohen, L., Manion, L., Morrison, K. (2013). *Research Methods in Education* (7th ed.). London: Routledge.

de Bakker, D.H., Polder, J.J., Sluijs, E.M., Treurniet, H.F., Hoeymans, N., Hingstman, L., . . . van der Velden, L.F.J. (2005). Op één lijn: Toekomstverkenning eerstelijnszorg 2020. Retrieved Februari 7, 2017, from http://www.nivel.nl/sites/default/files/bestanden/toekomst-eerstelijnszorg-2020.pdf

de Jong, S., Barker, K., Cox, D., Sveinsdottir, T., Van den Besselaar, P. (2014). Understanding societal impact through productive interactions: ICT research as a case. *Research evaluation, 23*(2), 89-102. DOI: 10.1093/reseval/rvu001

Dekker, S. (2017). Wetenschap met impact. Retrieved February 21, 2017, from https://www.rijksoverheid.nl/documenten/kamerstukken/2017/01/19/kamerbrief-over-wetenschap-met-impact

Donabedian, A. (2005). Evaluating the quality of medical care. *The Milbank Quarterly, 83*(4), 691-729. DOI: 10.1111/j.1468-0009.2005.00397.x

Donovan, C. (2007). The qualitative future of research evaluation. *Science and public policy, 34*(8), 585-597. DOI: 10.3152/030234207X256538

Donovan, C. (2011). State of the art in assessing research impact: introduction to a special issue. *Research Evaluation*, *20*(3), 175-179.

Eijssens, E., Konings, J. (2014). De implementatiepotentie van op een lijn-projecten: Deel I Eindrapportage. Retrieved February 28, 2017, from https://www.zonmw.nl/uploads/tx_vipublicaties/Eindrapportage_De_implementatiepotentie_van_Op_een_Lijn-projecten_Deel_I__-_oktober_2014.pdf

Erasmus University Rotterdam [EUR]. (n.d). What is valorisation? Retrieved February 17, 2017 from https://www.eur.nl/english/ecv/employees/what_is_valorisation/

Fagin, C.M. (1992). Collaboration between nurses and physicians: no longer a choice. *Nurs Health Care, 13*(7), 354–362.

Ferdinandus, S. (2016). Measuring the societal impact of projects financed by ZonMw. Internship report VU University Amsterdam.

Flick, U. (2009). *An Introduction to Qualitative Research.* 4thn edn. London: Sage.

Gray, D.E. (2014). *Doing Research in the Real World* (3rd ed.). London, England: Sage Publications

Greene, J.C., Caracelli, V.J., Graham, W.F. (1989). Toward a conceptual framework for mixed-method evaluation designs. *Educational evaluation and policy analysis, 11*(3), 255-274. DOI: 10.3102/01623737011003255

Greenhalgh T., Robert G., Bate P., Kyriakidou O., Macfarlane F., Peacock R. (2004). *How to Spread Good Ideas: A Systematic Review of the Literature on Diffusion, Dissemination and Sustainability of Innovations in Health Service Delivery and Organisation.* Retrieved February 20, 2017 from http://www.netscc.ac.uk/hsdr/files/project/SDO_FR_08-1201-038_V01.pdf

Hansen, J., van Greuningen, M., Batenburg, R.S. (2010). Monitor multidisciplinaire samenwerking binnen de eerste lijn: Achtergronden en resultaten van een trend- en verdiepingsstudie. Retrieved February 8, 2017 from http://www.nivel.nl/sites/default/files/bestanden/Rapport-Monitor-multidisciplinaire-samenwerking-eerste-lijn.pdf

Harvey, C.D. (1988). Telephone Survey Techniques. *Canadian Home Economics Journal, 38*(1), 30–5.

Hill, S. (2016). Assessing (for) impact: future assessment of the societal impact of research. *Palgrave Communications, 2*(16073). DOI: 10.1057/palcomms.2016.73

Huber, M., Knottnerus, J.A., Green, L., van der Horst, H., Jadad, A.R., Kromhout, D., . . . Smid, H. (2011). How should we define health? *British Medical Journal, 343,* d4163. DOI: 10.1136/bmj.d4163

InEen. (n.d.). Over InEen. Retrieved Februari 21, 2017 from https://ineen.nl/over-ineen/

Institute of Medicine. (2001). Envisioning the National Health Care Quality Report. Washington, D.C.: National Academies Press.

Institute for Positive Health. (2015). Scoringsinstrument. Retrieved June 16, 2017 from http://www.ipositivehealth.com/scoringsinstrument-voor-positieve-gezondheid/

Johnson, R.B., Onwuegbuzie, A.J., Turner, L.A. (2007). Toward a definition of mixed methods research. *Journal of Mixed Methods research, 1*(2), 112-133. DOI: 10.1177/1558689806298224

Kirchner, J.E., Parker, L.E., Bonner, L.M., Fickel, J.J., Yano, E.M. and Ritchie, M.J. (2012). Roles of managers, frontline staff and local champions, in implementing quality improvement: stakeholders' perspectives. *Journal of Evaluation in Clinical Practice, 18,* 63–69. DOI: 10.1111/j.1365-2753.2010.01518.x

Klompmaker, L., Klop, R., Pieterse, M. (2016). Kennisvouchertraject eerstelijnszorg: Programma Op

één lijn. Retrieved February 6, 2017 from http://www.zonmw.nl/uploads/tx_vipublicaties/Kennisvouchertraject_eerstelijnszorg_01.pdf

Kuruvilla, S., Mays, N., Pleasant, A., Walt, G. (2006). Describing the impact of health research: a Research Impact Framework. *BMC Health Services Research, 6*(1), 134. DOI: 10.1186/1472-6963-6-134

Lansisalmi, H., M. Kivimaki, P. Aalto, R. Ruoranen. (2006). Innovation in Healthcare: A Systematic Review of Recent Research. *Nursing Science Quarterly, 19*: 66-72. DOI: 10.1177/08943 18405284129

Martin, B.R. (2007). *Assessing the impact of basic research on society and the economy.* [Powerpoint slides]. Retrieved May 5, 2017 from https://www.researchgate.net/publication/228894032_Assessing_the_Impact_of_Basic_Research_on_Society_and_the_Economy

MAXQDA. (n.d.). Software for Qualitative, Quantitative and Mixed Methods Research. Retrieved June 26, 2017 from: http://www.maxqda.com/

Mays, N. (1995). Qualitative research: rigour and qualitative research. *British Medical Journal, 311,* 109-122. DOI: 10.1136/bmj.311.6997.109

Menzis. (2016). Bijlage 5 zorginkoopbeleid Huisartsenzorg en multidisciplinaire zorg. Retrieved June 26, 2017 from https://www.menzis.nl/zorgaanbieders/-/m/publieke-sites/menzis/zorgaanbieders /downloads/huisartsenzorg/contractering/themapaginas/bijlage-5-gez-module-versie-30082016.pdf

Ministerie van Volksgezondheid, Welzijn en Sport [VWS]. (2007). Versterking geintegreerde eerstelijns zorg. Retrieved February 1, 2017 from https://www.rijksoverheid.nl/documenten/kamerstukken/2007/09/04/versterking-geintegreerde-eerstelijnszorg

Ministerie van VWS. (2008). Substitutie van zorg. Retrieved February 1, 2017 from https://www.rijksoverheid.nl/documenten/kamerstukken/2008/09/12/substitutie-van-zorg

Molas-Gallart, J., Tang, P. (2011). Tracing 'productive interactions' to identify social impacts: an example from the social sciences. *Research Evaluation, 20*(3), 219-226. DOI: 10.3152/0958 20211X12941371876706

Moullin, J.C., Sabater-Hernández, Fernandez-Llimos, F., Benrimoj, S.I. (2015). A systematic review of implementation frameworks of innovations in healthcare and resulting generic implementation framework. *Health Research Policy and Systems, 13*:16. DOI: 10.1186/s12961-015-0005-z

NIVEL Zorgregistraties eerste lijn. (2016). Prevalentie chronische ziekte naar leeftijd en geslacht. Retrieved February 7, 2017 from https://www.volksgezondheidenzorg.info/onderwerp/chronische-ziekten-en-multimorbiditeit/cijfers-context/prevalentie

Omachonu, V.K., Einspruch, N.G. (2010). Innovation in Healthcare Delivery Systems: A Conceptual Framework. *The Innovation Journal: The Public Sector Innovation Journal, 15*(1), 2.

Onwuegbuzie, A.J., Leech, N.L. (2007). Sampling designs in qualitative research: Making the sampling process more public. *The Qualitative Report, 12*(2), 238-254.

Patton, M.Q. (2002). *Qualitative research and evaluation methods,* 3rd edn. Newbury Park, CA: Sage.

Ploeg, J., Markle-Reid, M., Davies, B., Higuchi, K., Gifford, W., Bajnok, I., McConnell, H, Plenderleith, J., Foster, S., Bookey-Bassett, S. (2014). Spreading and sustaining best practices for home care of older adults: a grounded theory study. *Implementation Science, 9*, 162. DOI: 10.1186/s13012-014-0162-4

Raad voor de Volksgezondheid en Zorg [RVZ]. (1998). Redesign van de eerste lijn in transmuraal

perspectief. Retrieved February 13, 2017 from https://www.raadrvs.nl/uploads/docs/Redesign_van_de_eerste_lijn_in_transmuraal_perspectief.pdf

Raad voor Volksgezondheid en Samenleving. (2017). Zonder context geen bewijs Over de illusie van evidence-based practice in de zorg. Retrieved, June 27, 2017 from https://www.raadrvs.nl/uploads/docs/Zonder_context_geen_bewijs.pdf

RIVM Centrum Gezond Leven. (2014). Kwaliteit én meer: Over het gebruik van erkende interventies. Retrieved June 16, 2017 from https://www.loketgezondleven.nl/sites/default/files/o21348_Onderzoek-gebruik-erkende-interventies.pdf

RIVM Centrum Gezond Leven. (2016). Doel van het erkennigstraject. Retrieved June 16, 2017 from https://www.loketgezondleven.nl/leefstijlinterventies/erkenningstraject/beoordeling/doel-van-het-erkenningstraject

ROS netwerk. (2016). Position paper: Regionale ondersteunings structuren. Retrieved February 15, 2017, from http://www.ros-netwerk.nl/wp-content/uploads/2014/09/ROS-netwerk-Position-Paper-2016-def-web.pdf

Schrijvers, G. (2016). *Integrated care: Better and cheapter.* Amsterdam, the Netherlands: Reed business information.

Simmons R., Fajans P., Ghiron L. (2007) *Scaling-Up Health Service Delivery: From Pilot Innovations to Policies and Programme.* Retrieved June 6, 2017 from https://books.google.nl/books?hl=nl&lr=&id=rsuwy2UJMQC&oi=fnd&pg=PR1&ots=WDqLMRJoQb&sig=S4U31dfhZuhXPXJs46o5W3BZWmY& redir_esc=y#v=onepage&q&f=false

Smits, R, Kuhlmann, S. (2004). The rise of systemic instruments in innovation policy. *International Journal of Foresight and innovation Policy, 1*(1/2), 4–32. DOI: 10.1504/IJFIP.2004.004621

Spaapen, J., van Drooge, L. (2011). Introducing 'productive interactions' in social impact assessment. *Research Evaluation, 20*(3), 211-218. DOI: 10.3152/095820211X12941371876742

Spaapen, J., van Drooge, L., Propp, T., van der Meulen, B., Shinn, T., Marcovich, . . . Castro-Martinez, E. (2011). SIAMPI final report. Retrieved February 21, 2017 from http://siampi.eu/Content/SIAMPI_Final%20report.pdf

Sturges, J.E., Hanrahan, K.J. (2004). Comparing telephone and face-to-face qualitative interviewing: a research note. *Qualitative Research, 4*(1), 107-118. DOI: 10.1177/1468794104041110

van de Looij-Jansen, P.M., de Wilde, E.J. (2008). Comparison of Web-Based versus Paper-and-Pencil Self-Administered Questionnaire: Effects on Health Indicators in Dutch Adolescents. *Health services research, 43*(5), 1708-1721. DOI: 10.1111/j.1475-6773.2008.00860.x.

van Leeuwen, S. (2006). Tien succesfactoren voor innovatie. Retrieved March 8, 2017 from http://www.indora.nl/wp-content/uploads/2013/06/ZORGMANAGEMENT-10-Succesfactoren-voor-innovatie.pdf

van Linge, R. (2006). Innoveren in de gezondheidszorg: Theorie, praktijk en onderzoek. Retrieved March 8, 2017 from https://www.google.nl/search?hl=nl&tbo=p&tbm=bks&q=isbn:9035228537

van Rijn, M.J. (2015). Vernieuwingsbrief zorg en ondersteuning dichtbij huis. Retrieved March 2, 2017 from https://www.rijksoverheid.nl/documenten/kamerstukken/2015/04/29/kamerbrief-over-zorg-en-ondersteuning-dichtbij-huis

Vilans. (2016). Dit is Vilans. Retrieved February 21, 2017, from http://www.vilans.nl/dit-is-vilans.html

Vilans. (n.d.). Zo werken wij. Retrieved February 21, 2017, from http://www.vilans.nl/zo-werken-wij.html

West, M.A. (1990). *Innovation and Creativity at Work: Psychological and Organizational Strategies.*

Chichester, England: Wiley.
World Economic Forum. (2013). A vision for the Dutch health care system in 2040: Towards a sustainable high-quality health care system. Retrieved February 28, 2017 from http://www.mckinsey.com/~/media/mckinsey%20offices/netherlands/latest%20thinking/pdfs/wef_mckinsey_report_2013_vision_for_dutch_health_care_in_2040.ashx
World Health Organization [WHO]. (2006). Quality of care: A process for making strategic choices in health systems. Retrieved March 8, 2017 from http://www.who.int/management/quality/assurance/QualityCare_B.Def.pdf?ua=1
WHO. (2008). Integrated health services – what and why? Retrieved February 28, 2017 from http://www.who.int/healthsystems/service_delivery_techbrief1.pdf
WHO. (2010). Framework for Action on Interprofessional Education & Collaborative Practice. Geneva: World Health Organization. Retrieved March 6, 2016 from http://apps.who.int/iris/bitstream/10665/70185/1/WHO_HRH_HPN_10.3_eng.pdf?ua=1
World Health Organization. (n.d.). Frequently asked questions. Retrieved June 26, 2017 from http://www.who.int/suggestions/faq/en/
ZonMw. (2009). ZonMw-Programma: Op één lijn: Meer gezondheid en participatie door sterke organisatie van zorg dicht bij huis. Retrieved February 6, 2017 from https://www.zonmw.nl/uploads/tx_vipublicaties/Microsoft_Word__090729_Programmavoorstel_VEL_formeel_VWS__definitief_2_1_.pdf
ZonMw. (2014). Op één lijn: Schetsen voor een betere eerste lijn. Retrieved February 6, 2017 from http://www.zonmw.nl/uploads/tx_vipublicaties/OP_EEN_LIJN_schetsen_voor_een_betere_eerstelijn_DEF.pdf
ZonMw. (2015). Evaluatie programma Op één lijn: Meer gezondheid en participatie door sterke organisatie van zorg dicht bij huis. Retrieved February 10, 2017, from https://www.zonmw.nl/uploads/tx_vipublicaties/2015_10_Evaluatierapport_Op_een_lijn.pdf
ZonMw. (2016a). Kennis maken op maat, samen met betrokken partners: Beleidsplan ZonMw 2016-2020. Retrieved February 14, 2017 from http://www.zonmw.nl/fileadmin/zonmw/documenten/Corporate/Over_ZonMw/ZonMw_beleidsplan2016-2020_2.pdf
ZonMw. (2016b). Jaarverslag ZonMw 2015. Retrieved February 14, 2017, from https://www.zonmw.nl/fileadmin/zonmw/documenten/Corporate/Over_ZonMw/ZonMw_jaarverslag_2015.pdf
ZonMw. (2016c). VIMP – wat is het? Retrieved February 20, 2017, from https://www.zonmw.nl/fileadmin/documenten/Implementatie/Leidraad_VIMP_01.pdf
ZonMw. (2016d). Procedurebrochure aanvragers. Retrieved February 16, 2017, from https://www.zonmw.nl/fileadmin/documenten/Corporate/Procedurebrochure_ZonMw_aanvragers_v3.pdf
ZonMw. (2016e). Monitor Kennisbenutting (MKB). Retrieved February 22, 2017, from http://www.intranet.lan/groepen/projectgroep-nieuwe-vrap/
ZonMw. (n.d.a). Organisatie en werkwijze. Retrieved February 13, 2017, from https://www.zonmw.nl/nl/over-zonmw/organisatie-en-werkwijze/
ZonMw. (n.d.b.). Projecten. Retrieved March 8, 2017 from https://www.zonmw.nl/nl/onderzoek-resultaten/kwaliteit-van-zorg/programmas/programma-detail/op-een-lijn/projecten/
ZorgImpuls. (n.d.). Geintegreerde eerstelijnzorg. Retrieved February 17, 2017, from https://www.zorgimpuls.nl/geintegreerde-eerstelijnszorg-31

Appendix

Appendix I: Subsidy allocation procedure

The application procedure for subsidies is normally as follows. ZonMw places a call for project ideas within a programme. Researchers and institutions can then submit their project ideas for that specific programme. This project idea is a brief description of the project to assess the relevance for the programme and the quality of the project. When the call is closed, the submitted projects will be reviewed by the programme commission of ZonMw and an interim advice is provided. If the advice is positive, this will result in the request to submit a subsidy application. The subsidy applications are much more elaborate than the project ideas and focus more on the methodology of the project. The subsidy applications will then be reviewed on quality by independent referees, which are experts in the field and do not have any interest in the approval of applications. The final assessment on relevance and quality is performed by the programme commission. After the final rating, the applicators receive a commitment or rejection of the director of ZonMw on behalf of the board (ZonMw, 2016d).

This entire application procedure lasts from six to ten months. However, the time periods vary between programmes. Once a project is honoured, it is obligatory to start the project within six months after the approval to be entitled to receive the subsidy. During the programme and five years after the ending, the researchers have the duty to make products, publications and other results from the project known to ZonMw. The reason for this is that other professionals in this way can also profit from the project. At the end of the project, a report about the project needs to be filed to ZonMw, including both financial aspects and end-results (ZonMw, 2016d).

Appendix II: questionnaire

1. Zijn de doelstellingen van het project gerealiseerd?
o Geheel gerealiseerd
o Deels gerealiseerd, namelijk:
∗ Wijzigingen in uitvoering: Tijdsplanning
∗ Wijzigingen in uitvoering: Goedgekeurde begroting
∗ Wijzigingen in uitvoering: Vraagstelling/taakstelling
∗ Wijzigingen in uitvoering: Geplande activiteiten, plan van aanpak
∗ Wijzigingen in uitvoering: Beoogde resultaten
∗ Wijzigingen in uitvoering: Samenwerking
o Niet gerealiseerd
o Anders, namelijk:

2. Welke aangetoonde resultaten heeft het project opgeleverd?
Meerdere opties mogelijk
o Nieuwe evidence
o Gezondheidswinst (klinische uitkomst, inclusief preventie) bereikt
o Intermediaire producten (bv. business case, indicatoren set, richtlijn, infrastructuur, onderwijsmodule, ervaringskennis bv. ervaring met nieuwe methodiek)
o Verbetering in kwaliteit van leven (vanuit patiëntperspectief) bereikt
o Verbetering van kwaliteit van zorg bereikt (bv. organisatie van zorg; daadwerkelijke implementatie/toepassing)
o Kosteneffectiviteit/kostenbesparing bereikt
o Kostenbesparing in omvang (euro's per patiënt per jaar): …
o Geen
o Anders, namelijk:

3. Met welke partijen is samengewerkt in het project? *Meerdere opties mogelijk*
o Zorgprofessionals
o Onderwijs
o Patiënten/naasten/mantelzorgers
o Burgers
o Wetenschap eigen discipline
o Wetenschap andere disciplines
o Nationaal/internationaal beleid
o Lokaal/regionaal beleid
o Bedrijfsleven
o Zorginkopers/verzekeraars
o Fondsen
o Kennisinstituten
o Patiënten-, beroeps- of brancheorganisaties
o Geen (Ga door naar vraag 6)

o Anders, namelijk:

4. Is deze samenwerking geformaliseerd?
o Ja
o Nee

5. Vindt er periodiek overleg plaats? (Indien er meerdere antwoorden zijn aangevinkt bij 3: geef antwoord voor de belangrijkste partij)
o Ja, frequentie: …
o Nee
o Ja, anders

6. Welke producten zijn of zullen worden opgeleverd?
Meerdere opties mogelijk
o Artikel: Wetenschappelijk artikel
o Artikel: Conference paper/abstract
o Artikel: Artikel in vakblad
o Artikel: Artikel voor breed publiek
o Boek: Wetenschappelijk boek
o Boek: Hoofdstuk van wetenschappelijk boek
o Boek: Boek voor breed publiek
o Proefschrift
o Beleidsrapport: (Kosten) evaluatie / Business Impact Analyse / business case
o Beleidsrapport: Kwaliteitsverbetering
o Beleidsrapport: Zorgalternatieven
o Beleidsrapport: Overige beleidsrapporten
o Presentatie: Wetenschappelijke presentatie
o Presentatie: Presentatie voor een breed publiek
o Website
o Filmmateriaal
o Onderwijsproduct: Onderwijstraject, training, module, (online) educatief materiaal/e-learning
o Dataset
o Praktische toepassing: Richtlijn of protocol
o Praktische toepassing: Aanpassing verzekeringspakket
o Praktische toepassing: Opname in zorginkoop(gids)
o Praktische toepassing: Voorlichtingsmateriaal
o Praktische toepassing: Zorgpad of organisatiemodel
o Praktische toepassing: E-health toepassing
o Praktische toepassing: (Erkende) interventie
o Praktische toepassing: Implementatie strategie
o Praktische toepassing: (Elektronische) beslisondersteuning/keuzehulp
o Praktische toepassing: Overige praktische toepassingen
o Commerciële toepassing: Patent of octrooi

o Commerciële toepassing: Bedrijfsontwikkeling of spin-off
o Commerciële toepassing: Contract
o Commerciële toepassing: Productielijn
o Prijzen of onderscheidingen
o Infrastructuur
o Methodiek: Werkwijze aangepast
o Anders, namelijk:

7. Welke activiteiten gericht op verspreiding en toepassing van de resultaten zijn er gedurende of na afloop van het project ondernomen of gepland?
Meerdere opties mogelijk
o Vervolgonderzoek: Alleen wanneer u hier actief mee bezig bent
o Vervolg: Implementatietraject
o Informerende activiteiten: (Wetenschappelijke) presentatie/bijeenkomst
o Informerende activiteiten: Social media
o Informerende activiteiten: Website
o Informerende activiteiten: Nieuwsbrief
o Motiverende activiteiten: Expertmeeting/netwerkbijeenkomst
o Motiverende activiteiten: Gebruikers/patiënten/praktijkvertegenwoordigers bijeenkomst
o Motiverende activiteiten: Mobiliseren achterban/draagvlak creëren
o Educatieve activiteiten: Workshops
o Educatieve activiteiten: Vaardigheidstraining
o Educatieve activiteiten: Intervisie
o Educatieve activiteiten: Kennis op laten nemen in scholing
o Organisatorische activiteiten: Samenwerkingsverband vaststellen
o Organisatorische activiteiten: Ketenzorg opzetten
o Organisatorische activiteiten: Verbeteren van communicatie
o Organisatorische activiteiten: Infrastructuur realiseren
o Faciliterende activiteiten: Aanleveren projectmanagement vaardigheden
o Faciliterende activiteiten: Detacheren projectlid in de praktijk
o Faciliterende activiteiten: Gericht advies over toepassing
o Faciliterende activiteiten: Vertaalslag naar richtlijnen
o Marktgerichte activiteiten: Cijfers over prestaties publiek maken
o Marktgerichte activiteiten: Meedingen naar kwaliteitskeurmerk verzekeraar
o Patiëntgerichte activiteiten: Schriftelijke aanmoedigingen
o Patiëntgerichte activiteiten: Klachten en commentaren analyseren
o Patiëntgerichte activiteiten: Zelfmanagement
o Anders, namelijk:

8. Voor welke partijen zijn de resultaten van dit project relevant? (Alle partijen die uw resultaten gebruiken in de praktijk, verspreiden of verder ontwikkelen)
Meerdere opties mogelijk
o Zorgprofessionals

o Zorginstelling
o Onderwijs
o Patiënten/mantelzorgers/naasten
o Burgers
o Wetenschap
o Nationaal/internationaal beleid
o Lokaal/regionaal beleid
o Bedrijfsleven
o Zorginkopers/verzekeraars
o Fondsen
o Kennisinstituten
o Patiënten-, beroeps- of brancheorganisaties
o Geen
o Anders, namelijk:

9. Van welke partijen ontvangt het project cofinanciering (in cash, in kind en eigen bijdrage)?
Meerdere opties mogelijk
o Zorginstelling
o Onderwijs
o Patiënten/mantelzorgers/naasten
o Burgers
o Wetenschap
o Nationaal/internationaal beleid
o Lokaal/regionaal beleid
o Bedrijfsleven
o Zorginkopers/verzekeraars
o Fondsen
o Kennisinstituten
o Patiënten-, beroeps- of brancheorganisaties
o Geen
o Anders, namelijk:

10. Van welke partijen ontvangt het project vervolgfinanciering t.b.v. het verder brengen van de resultaten?
Meerdere opties mogelijk
o Zorgprofessional
o Zorginstelling
o Onderwijs
o Patiënten/mantelzorgers/naasten
o Burgers
o Wetenschap
o Nationaal/internationaal beleid
o Lokaal/regionaal beleid

o Bedrijfsleven
o Zorginkopers/verzekeraars
o Fondsen
o Kennisinstituten
o Patiënten-, beroeps- of brancheorganisaties
o Geen
o Anders, namelijk:

11. Hoe is deze financiering georganiseerd?
o Tijdelijk (bijv. vervolgonderzoek)/ korte termijn financiering
o Lange termijn (jaren)/ structurele financiering

12. Eventuele opmerkingen en suggesties

Appendix III: code sheet

Advies
Reden deelname/aanleiding
- Uitgangssituatie aanvrager
Toepasbaarheid advies
Actieplan adviseur
Aanpak/werkwijze adviseur tijdens project
- Delen documenten
Doelstellingen van aanvrager en adviseur
Achtergrond, expertise en rol adviseur

Resultaten
Producten: concrete producten die het kennisvoucherproject heeft opgeleverd.
Gebruik producten: voor wie zijn de producten die zijn opgeleverd in het project relevant
Effect/veranderingen (vooral op samenwerking)
Resultaat vergelijkbaar: is het resultaat van het project hetzelfde als van het voorbeeldproject
Doelstellingen gerealiseerd
Voortzetting project/resultaten ontwikkelen: hoe wordt het project of de resultaten van het project voortgezet.
Eigen inzichten, nut voor adviseur: wat heeft het project de adviseur gebracht

Samenwerkingen
Met (andere) adviseur, hoe contact
- Tot wanneer contact
Met aanvrager, hoe contact
Betrokkenheid adviseur formeel vastgelegd
Andere partijen: binnen het project of erna

Verspreidings- en implementatieactiviteiten
Tijdens traject: wat voor activiteiten hebben er plaatsgevonden binnen het project, met wie is er contact gezocht hiervoor
Aanwezigen/betrokkenen bij activiteiten en bij verspreiding project
Activiteiten na afloop van het project

Financieel
Hoeveel uur en frequentie/intensiviteit, verdeling uren
Cofinanciering/vervolgfinanciering

Kennisvoucher als instrument
Werkzaamheid voucher: waarom werkt een kennisvoucher wel of niet
Verwachtingen uitgekomen
Proces verbeteren
Impact versterken & verantwoordelijkheid impact

Appendix IV: original quotes in Dutch

“ ’s zomers zag ik in komkommertijd weer iets voorbijkomen dat je voor subsidie kon aanvragen en dat schoot bij mij zo in het verkeerde keelgat dat ik dacht van schei nou toch eens uit met dat gezeur allemaal. Omdat er natuurlijk heel veel bedacht wordt vanuit managementlagen wat goed is voor de huisartsen. Dus dat irriteert huisartsen nogal behoorlijk. […] Dus toen, toen heb ik in twee minuten iets ingediend en dat had te maken met het feit versterking van de eerste lijn tussen Scheveningen en Hoogvliet” (Respondent 14, applicant)

“het is anders dan het programma waar wij mee bezig waren […] we dachten van nou he we gaan gewoon kijken wat we ervan kunnen oppikken, het kopieren ofzo bij ons heeft nooit bij ons in de bedoeling gelegen […] maar wellicht zitten er aspecten in, dingen in waar we wat mee kunnen” (Respondent 11, applicant)

“Wij willen deze werkwijze structureel op veel plekken in Nederland vormgeven want als je een vernieuwende prestatie maar op één locatie in Nederland hebt, dan zal daar nooit een structurele financierder voor komen dus wij moeten het verspreiden.” (Respondent 5, advisor)

“we hebben een startdocument gemaakt […] maar als het gaat om vernieuwingsprocessen geloof ik veel meer in opduikende strategieën dan in vooruitgeplande strategieën. […] wanneer je niet bereid bent of de mogelijkheid krijgt om gaandeweg dingen bij te stellen en aan te passen aan wat je tegenkomt, dan geloof ik niet zo in vernieuwingsprocessen.” (Respondent 5, advisor)

“en die andere vier konden we eigenlijk ook met elkaar in verbinding brengen en dat was het mooie van het project dat het niet heel verspreid zat door heel Nederland. Dus wat ik gedaan heb is van der valk afgehuurd in Hoorn volgens mij en daar gezorgd dat iedereen twee dagen heel goed verzorgd met elkaar kon netwerken, dingen kon opschrijven, opzetten, criteria ontwikkelen.” (Respondent 4, advisor)

“We hebben natuurlijk ongelofelijk veel geadviseerd, maar we hebben ook ter plekke de SO met de huisartsen laten samenwerken, patiënten laten zien om hem te kunnen laten ervaren wat de meerwaarde van deze zorg is en dat werkt voor een vernieuwing die zo ingrijpt in de dagelijkse handelwijze van huisartsen veel beter” (Respondent 5, advisor)

“ja want dat merken we, dat je steeds daar toch gewoon op bezoek moet komen, a zet dat een stok achter de deur, maar daarmee sluit je ook heel erg aan per praktijk.” (Respondent 16, applicant)

“zij hadden wat dat betreft een grote voorsprong, zij hoefden verder niet veel meer te ontwikkelen, zij hadden de stukken. En ik zei ook van loop het door, pas het aan naar je eigen organisatie, verander namen, logo erboven” (Respondent 4, advisor)

“een goed voorbeeld is misschien pas af op het moment dat het daadwerkelijk overdraagbaar is, maar dat was bij sommige nog niet helemaal dus ik denk dat duwtje in de rug wat je nu dan geeft dat ze er wel producten van maken die overdraagbaar zijn […] dat was niet zo mooi uitgewerkt geweest als we dit niet hadden gedaan.” (Respondent 10, applicant and advisor)

“publiceren is echt rotwerk, vind ik tenminste. […] het is voor iedereen vaak een bijtaak he en dan komt het er niet van. Maar dat is wel jammer. Dus ik kan me wel voorstellen dat het publiceren erover dat ZonMw dat ook zou kunnen faciliteren […] En net zoals jij mij nu interviewt […] zo zou je natuurlijk

ook een inhoudelijk interview kunnen doen en zou kunnen helpen dat er ook een artikel over komt" (Respondent 2, advisor)

"en dat is dan wel heel nuttig he om de ROS gewoon een beetje erin mee te nemen in de hele ontwikkeling zodat zij dat verder kunnen voortzetten lokaal" (Respondent 7, advisor)

"Nou op zich, de bijeenkomst in, bij van der valk in Akersloot is eigenlijk een start geweest, waardoor je elkaar leert kennen en zo ga je automatisch, toch wel natuurlijk afspraken met elkaar maken. (Respondent 12, applicant)

"de voucher is zoveel uur waard, dus wij kunnen zoveel ondersteuning bieden. En als wij er overheen gaan is dat geen enkel probleem, want ja het is ons werk om mensen ondersteuning te bieden in een bepaalde vorm" (Respondent 4, advisor)

"we probeerden nog een subsidieaanvraag te regelen, nou die werd afgeketst […] Want ja een MDO is niet, natuurlijk ook niet innovatief, het is nooit de eerste keer meer dat we een MDO opzetten […] dus je kunt er ook niks meer voor krijgen." (Respondent 13, applicant)

"Op een gegeven moment denk je, het is niet meer zo'n onderwerp binnen de praktijk, hoe kan dat nou [...] Maar dan merk je toch dat je de SOLK patienten, dat je dat zo accuraat anders benadert, dat dat niet meer zo'n druk legt op de praktijk […] Ja op twee praktijken (van de vijf) is dat al zo." (Respondent 16, applicant)

"en als je dan kijkt naar wat het vervolg is geworden heeft Groningen, heeft zich daarna gewoon verder zelf opgepakt, is er verder na die bijeenkomst ook niet een heel concreet vervolg geweest [...] Tilburg […] op een gegeven moment is het daar gestagneerd om, ja ze toch weer andere keuzes maakten" (Respondent 6, advisor)

"En nu hadden we gewoon een stok achter de deur want we wisten het is een kostbare aangelegenheid maar het is ook een deskundig iemand en we zijn in goede handen en dat voelde goed hoor na het eerste gesprek" (Respondent 13, applicant)

"weet je het is heel simpel eigenlijk, verandering in de zorg, iedereen vindt het moeilijk, ook pilots vinden het moeilijk om wat te doen, maar door het delen van kennis en stapjes en krijg je ook een beetje zelfvertrouwen van hé dat zijn stapjes en die kunnen wij eigenlijk ook wel en zo werkt dat dan, en dan gaan er toch dingen gebeuren" (Respondent 7, advisor)

"wij hadden gewoon gedacht van je gaan een zorgprogramma implementeren, maar toen dachten we he dit zijn alleen maar fysiotherapeuten […] we konden helemaal niet dat zorgprogramma eigenlijk uitvoeren, want dan heb je de samenwerking met de huisarts voor nodig" (Respondent 2, advisor)

"het is natuurlijk wel te extrapoleren naar een oude wijk, dus we zijn niet helemaal hermetisch afgesloten zoals een dorp maar ja je kunt er iets van destilleren he, iets van gebruiken wat ze daar in die situatie ook hebben gebruikt" (Respondent 13, applicant)

"ja of zeggen van oke zonMw betaalt rechtstreeks de projectleiders. […] Ja want nu ben je, nu ben je als zonMw alle controle kwijt. En als projectleider heb je ook geen controle," (Respondent 4, advisor)

"Op locaties waar de eigen organisatie niet de middelen heeft om de eigen zorgverleners een vacatievergoeding te geven voor de tijd die ze niet aan de zorg besteden […] op die locaties denk ik

zou je die kennisvouchers moeten uitbreiden met een deel geld voor investering voor de eigen zorgverleners" (Respondent 5, advisor)

"de analyse belangrijk van welke projecten zet je in de etalage en die moeten aansluiten bij wat is er urgent in het veld. Daar hoort een vooranalyse bij en daar zou je ook de projectleiders en partners bij kunnen benutten om via een kennisbijeenkomst ofzo die dingen op te halen. (Respondent 1, advisor)

"de kennisvoucher is een manier om te kijken van goh kan je zo'n interventie landelijk implementeren, maar dat blijft natuurlijk dan een eenmalig iets en dat draagt wat mij betreft niet bij aan dat je ook daadwerkelijk tot implementatie komt op een eenduidige manier […] het heeft vooral zin als dat soort dingen ook ter beschikking stellen op het moment dat er ook al zeg maar door de verschillende partijen in het land ook al draagvlak is van hier willen we verder op en willen ook de interventie zelf verder brengen zeg maar en borgen, dan kunnen dit soort impulsen wel helpen." (Respondent 8, advisor)

"dat je een soort kan zeggen tegen de praktijken nou het ziet er zo uit, zo veel bijeenkomsten, daar gaat dit en dit en dit in gebeuren, we hebben toch gemerkt dat […] dat mensen toch in die oppervlaktestructuur houvast nodig hebben." (Respondent 16, applicant)

"misschien vaker een terugkoppeling naar jullie [...] Volgens mij heb je nu, weet je die vouchers gegeven, maar je hebt eigenlijk geen idee wat er gebeurt" (Respondent 12, applicant)

Appendix V: interviewee information

Respondent number	Applicant/advisor	Applied for how many locations	Corresponding applicant/advisor
Respondent 1	Advisor	One	Respondent 14
Respondent 2	Advisor	Four	Respondent 16
Respondent 3	Advisor	Five	Respondent 10
Respondent 4	Advisor	Five	Respondent 12 and 17
Respondent 5	Advisor	One	Respondent 15
Respondent 6	Advisor	Two	/
Respondent 7	Advisor	Three	Respondent 11
Respondent 8	Advisor	One	/
Respondent 9	Advisor	One	Respondent 13
Respondent 10	Applicant and advisor	Two projects as advisor, two projects as applicant: one which was divided over 23 locations.	Respondent 3
Respondent 11	Applicant	One healthcare center	Respondent 7
Respondent 12	Applicant	One hospital	Respondent 4
Respondent 13	Applicant	One Pharmacia	Respondent 9
Respondent 14	Applicant	One General Practice	Respondent 1
Respondent 15	Applicant	One General Practice	Respondent 5
Respondent 16	Applicant	One care group with five different practices	Respondent 2
Respondent 17	Applicant	One speech therapy practice	Respondent 4

Appendix VI Recommendations for MKB questionnaire

The most important considerations for the improvement of the questionnaire:

- The option “otherwise” provided insight in the answer options that can be added to the questionnaire in the future. The possible new answer options are depicted below.
  - Cofinanciering: zorgprofessionals, GEZ, huisartsengroep, ZonH
  - Vervolgfinanciering: GEZ, onbekend
  - Producten: geen
  - Resultaten: minder druk op professionals, verbetering kwaliteit van zorg verwacht
  - Resultaten relevant: gemeente, ros
  - Samenwerking: ZonH, InEen, Vilans, RIVM, zorgbelang NL, sociaal wijkteam
- When comparing the outcomes of the interviews with that of the questionnaires, some variations appeared in the data. For example, in one case the interview showed that the project had stagnated, despite the fact that the goals were met according to the questionnaire. Therefore, more attention needs to be paid to the current situation of the projects in the questionnaire. For instance, a question can be added on the current situation of the project.
- The answer options of the question about the results were too resembling. Moreover, the participants did not always comprehend what was meant with each option. ‘
- It should be clearer to the participants when they are allowed to select an option and when not. In the current MKB questionnaire, participants could select “increased quality of care achieved”, for example, without them having measured this. The same happened with the question about the products, in which participants selected products they were planning to develop instead of only the true developed products. Conversely, this is also a positive point of the questionnaire, as it provides more insight in the future of the project.
- There is also a downside to adjusting the questionnaire. If more questions are added, this asks more from the participants, and thus increases the administrative actions. Furthermore, it is only helpful to add questions to the questionnaire if the answers truly influence ZonMw’s policy concerning the projects.