Chapter 8

General discussion
Patient empowerment and eHealth are two rapidly evolving areas in the field of health care. This thesis focused on the question of whether patient empowerment by an eHealth intervention is applicable and effective to a rather specific area of health care: insurance medicine. More specifically, this thesis described a project, in which an interactive web-based intervention was developed to empower disability benefit claimants, prior to the assessment of their disability by an insurance physician. The main aim of this thesis was to study the effectiveness of this intervention, evaluated by a randomized controlled trial. In addition, this thesis tried to find an answer to the question of whether, in general, the Internet can be an effective medium to empower individuals with a disease, and an effort was made to develop an instrument to measure the outcome ‘empowerment’ in research.

In this final chapter, the main findings of this thesis will be summarized, followed by a discussion of methodological considerations, comparisons with other studies, and implications for future research and practice.

**Main findings**

In a systematic review (Chapter 2) it was found that, in web-based research, the construct empowerment is not so often measured explicitly. Among the numerous evaluated empowerment-based online interventions, only two studies measured empowerment explicitly by using the Diabetes Empowerment Scale 1. Other studies used outcomes that are thought to be related to empowerment, such as self-efficacy, mastery, or self-esteem. In general, there are some indications that web-based interventions indeed have the possibility to empower patients and to have benefits on the mentioned outcomes, but more high-quality work is needed to make more definite conclusions.

In an attempt to measure the outcome empowerment on basis of a clear theoretical framework and definition, Chapter 3 describes the development of a new instrument to measure empowerment among people with a long-term work disability. This instrument, originally developed by a Dutch rehabilitation centre, showed promising results in terms of internal consistency. However, more psychometric work is needed to get insight into the validity of this so-called ‘VrijBaan’ instrument, before it can be used convincingly in other research.

As to the main questions of this thesis: does the intervention www.wiagesprek.nl work for disability benefit claimants? First, a process evaluation in Chapter 5 showed that the intervention’s reach was disappointing (only 9% of the approached claimants were interested in using it), that compliance with the intervention was low (only one-third of the participants used the intervention as intended), but that user satisfaction was high. In an effectiveness study, www.wiagesprek.nl turned out not to be effective on almost all measured outcomes (Chapter 6). An exception was that the intervention was effective in increasing knowledge about disability legislation and disability assessment procedures. On the other hand, perceived justice was lower among participants from the intervention group, compared to their controls. As compliance with the intervention was low, per-protocol analyses (Chapter 7) revealed that www.wiagesprek.nl was efficacious on context-specific empowerment, coping, and active participation, but this shift had no further beneficial effects in terms of claimant satisfaction nor on perceived justice. With regard to the possible benefits to the Dutch social security system, the results of this thesis show that claimant empowerment did not lead to shifts in administrated disability benefits, nor did it change claimants’ acceptance of disability procedures outcomes, expressed in filed complaints against physicians and objections with the assessment outcome.

In conclusion, the results of this thesis lead to the following key messages:
Key messages
1. The uptake of the intervention www.wiagesprek.nl among disability benefit claimants was low. On basis of the results of this thesis, it can be estimated that 9% of all disability benefit claimants in the Netherlands (± 3400/year) will be interested in using it, and 3% (± 1200/year) will end up using it as intended.

2. If implemented in daily practice, it cannot be expected that the intervention www.wiagesprek.nl will be an effective empowerment tool for insurance medicine. On the contrary, results from this thesis showed that the intervention can be effective to serve as an information tool for disability benefit claimants. The adverse effects of the intervention on feelings of injustice among claimants should, however, not be ignored.

3. Under the condition that it is being used as intended, www.wiagesprek.nl empowers or activates claimants towards their assessment. However, on basis of the results of this thesis, it cannot be concluded that this shift has benefits in terms of claimant satisfaction or perceived justice, nor to the Dutch social security system by lowering filed objections to the assessment outcome or complaints against insurance physicians.

Methodological considerations
In this section, an overview is given on what factors may have possibly biased the results of this thesis, and, consequently, the conclusions that are made on basis of these results. For each part of the research process, some pros and cons are given on the way these parts were carried out.

Development of the intervention
The website www.wiagesprek.nl was developed in the period May 2007 until November 2008. In this period of 18 months, the intervention was constructed with the help of the Intervention Mapping (IM) protocol; a stepwise approach for theory- and evidence-based development and implementation of interventions 1. In this approach, the target population and relevant stakeholders were extensively consulted to give input to the contents of the intervention. Semi-structured interviews were held with insurance physicians and work experts, questionnaires were sent to claimants, and several focus groups with stakeholders were held to make sure the intervention would correspond with the stakeholders needs (see Chapter 4). This rigorous pre-evaluation contributed to a comprehensive intervention, which additionally was improved after a one-month pilot and on basis of users’ feedback. However, throughout the IM process, it became clear that with concern to the ultimate goal of the intervention, i.e. to increase levels of empowerment among disability claimants, a clear theoretical framework on how to enhance empowerment was lacking. Therefore, as to the methods that were used to increase empowerment, we had to settle for less grounded and proven methods described in literature, such as trying to, for example, enhance self-awareness, self-efficacy, knowledge or skills.

Delivering the intervention
The trial in which www.wiagesprek.nl was evaluated was highly pragmatic. This means that we kept exclusion criteria to a minimum, did not stimulate participant compliance in any way, changed neither procedures within UWV nor the professionals for the sake of the trial, and delivered the intervention to its target population on basis of ‘real world’ conditions. A priori, a big advantage of this pragmatic focus was that the study’s results would reflect what would happen in real life if the intervention would have been implemented (high external validity) 2. During the trial, however, we experienced some downsides of this pragmatic approach. Most importantly, an issue in the logistics of the trial, which had a big consequence in delivering the intervention, was the timing of sending the study’s invitations. Since it was the most practical option, we choose to send these invitation brochures together with the standard invitational letters that are normally sent by the back office of UWV. By the time of conducting the trial, administrative protocols within UWV stated that, within the 2 weeks before a disability assessment, claimants should receive their invitations. In practice, this turned out to be a much shorter period, with in some cases claimants even receiving their (study) invitation just a few (or even one) day(s) before their assessment. This low reach and its associated self-selection of participants, often experienced within epidemiological studies in general 3 and web-based studies in particular 4, resulted in trial participants to be different from non-participants (see Chapter 5). Consequently, the study’s external validity was decreased. Finally, the intervention was delivered through three different UWV offices in an urban part of the Netherlands (The Hague, Rotterdam, and Leiden). Although these offices were comparable to the national mean with regard to claimants’ age, gender, and rates of complaints and objection filed by claimants (see Chapter 5), claimants coming to these offices might somewhat differ from those living in the more rural areas of the Netherlands. This may have led to the fact that the study’s results are not fully generalizable.

Outcome measures
The intended purpose of the intervention www.wiagesprek.nl was to enhance empowerment among disability benefit claimants. In order to evaluate the intervention’s effectiveness, it was necessary to measure empowerment as an outcome. Chapter 3 of this thesis describes the development of the ‘VrijBaan’ questionnaire, a questionnaire that measures empowerment among people with a long-term work disability.

We choose this instrument to measure our primary outcome, because it was the only available instrument that intends to measure empowerment among our target population. Because it is a relatively new instrument, its reliability, validity, and responsiveness are not yet known. According to the new COmmittee-based Standards for the selection of health Measurement INstruments (COSMIN) initiative, health-related patient reported outcomes (HR-PROs) should be assessed on their methodological quality to guarantee appropriate conclusions, and to get insight into the possible risks of measurement bias 5. When subjecting the
“VrijBaan” questionnaire to the COSMIN checklist, it can be concluded that this questionnaire scores “good” (+) on the properties internal consistency and content validity, “fair” (-) on the property structural validity, and “poor” (0) on reliability, measurement error, hypotheses testing, cross-cultural validity, criterion validity, responsiveness, and interpretability since none of these properties were investigated (see www.cosmin.nl for more information about the scoring procedures). Getting more insight into the latter properties would enable us to obtain a better idea of the quality of the instrument we used to measure our primary outcome. With regard to the secondary outcomes, it can be stated that most of these were properly validated tools, such as, for example, the General Self-efficacy scale 7, Pearlin Mastery Scale 8, or the Ways of Coping questionnaire 9.

In terms of measuring the outcomes on several occasions and the influence of losses to follow-up on the validity of these measurements, it can be concluded that these were satisfactory. In general, it has been stated that a loss to follow-up of more than 20% poses serious threats to the internal validity 10,11. Since in our study 18% of the participants were lost to follow-up at the last measurement, it seems that drop-outs were acceptable and did not cause serious problems. Above all, drop-out analysis in our study revealed that participants who dropped out did not differ from participants who were followed up, indicating that non-selective drop-out took place.

### Study design

The study described in this thesis was a randomized controlled trial (RCT). In epidemiology, an RCT is considered to be the gold standard for investigating the effects of an intervention 12. Despite being considered medicine’s most reliable method for “representing things as they really are”, even RCTs can be subject to a considerable amount of bias or contain “fatal flaws”, which would strongly weaken the evidence produced by these RCTs 13. To evaluate the possibilities of bias in an RCT, therefore, several checklists have been developed to measure a study’s methodological quality. An example of such a checklist is the Downs and Black (D&B) checklist 14, which is rated among the top six quality assessment scales 15. This list assesses study’s reporting, external validity, internal validity (i.e. bias and confounding), and statistical power. In Chapter 2 of this thesis we used this list to determine the quality of studies included in a systematic review (see page 23 for more details). We asked two independent researchers (AvD and HvD), who are experienced with assessing a study’s methodological quality, to apply the D&B checklist to our trial. Results from this assessment indicated that, for our own trial, the scores on reporting, external validity, internal validity, and power would be 10 out of 11, 0 out of 3, 11 out of 13, and 1 out of 1, respectively (see Table 1 for more detail). In total, this means our study would score 21 out of 28 points, which corresponds with the methodological quality level “good”.

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### Data analysis

The data processing was carried out carefully. With regard to missing data, we experienced the advantages of using online questionnaires. These questionnaires were programmed in a way, which made it impossible for study participants to not fill out a certain question or skipping certain parts of the questionnaire. In addition, while programming the questionnaires, ranges of scores could be inputted, thus minimizing the chances of outliers or extreme scores. These advantages increased the chance of having ‘clean’ data. Data analysis were

### Table 1. Study quality according to the Downs and Black checklist

<table>
<thead>
<tr>
<th>Reporting</th>
<th>Internal Validity</th>
<th>Power</th>
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</thead>
<tbody>
<tr>
<td>1. Hypotheses, aim &amp; objective</td>
<td>1. Blinding of patients?</td>
<td>1</td>
</tr>
<tr>
<td>2. Main outcomes</td>
<td>2. Blinding of the outcome assessor?</td>
<td>0</td>
</tr>
<tr>
<td>3. Patients characteristics</td>
<td>3. Adequate method of randomization?</td>
<td>1</td>
</tr>
<tr>
<td>4. Interventions</td>
<td>4. Concealment of treatment allocation?</td>
<td>1</td>
</tr>
<tr>
<td>5. Distribution of principal confounders</td>
<td>5. Comparable recruitment procedures?</td>
<td>1</td>
</tr>
<tr>
<td>6. Main findings</td>
<td>6. Main outcomes assessed accurately?</td>
<td>0</td>
</tr>
<tr>
<td>7. Estimates of random variability</td>
<td>7. Similarity of baseline characteristics?</td>
<td>1</td>
</tr>
<tr>
<td>8. Adverse events</td>
<td>8. Appropriate statistical tests?</td>
<td>1</td>
</tr>
<tr>
<td>9. Characteristics of patients lost to follow-up</td>
<td>9. Compliance reliable?</td>
<td>1</td>
</tr>
<tr>
<td>10. Probability values</td>
<td>10. Probability values</td>
<td>0</td>
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As a special note, blinding of patients in this trial was unique in the area of web-based research. We used a ‘sham’ website, with commonly available information only, to serve as a control condition. Through the use of this parallel used website, claimants were not aware of the study design and the existence of two separate study conditions. For web-based trials in general, patient blinding is a complicated issue to accomplish 16. For that reason, many trials use alternate designs, such as a waiting list control group. The possibility of blinding in this study reduced the risk of bias.

### A gold standard RCT was used to evaluate the effectiveness of our intervention + Risk of bias was minimized by participant’s blinding and an acceptable drop-out rate

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Furthermore conducted using ‘standard’ recommended linear or logistic regression methods. We also performed longitudinal generalized estimation equations (GEE) analysis, which are currently being considered state-of-the-art methods for analysing RCTs with more than one follow-up measurement. Before conducting these methods we thoroughly checked for effect modification and, if necessary, adjusted for confounding, thus minimizing the risk of bias.

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**Data obtained during the trial was not susceptible to errors, as a consequence of using online questionnaires**

**We used state-of-the-art statistical methods to analyse our longitudinal data**

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### Program Failure or Theory Failure?

Despite some possibility of bias in the results described above, it seems plausible to conclude that overall, the web-based intervention studied in this thesis was not effective. The question that rises in this case is: why was www.wiagesprek.nl not effective? In occupational epidemiology, Kristensen distinguishes two possible reasons for an intervention not being effective: either the theoretical idea and hypotheses behind the intervention were wrong (theory failure), or the intervention itself was so poorly adopted by its target population that, even if the theory behind it was right, it could not possibly be effective (program failure).

In analogy with, for example, clinical research on the effectiveness of a new medicine, this would mean that it would not help if the patient would take this medicine if it was not effective (theory failure), and it would not have helped that the medicine had an effect if the patient would not have taken it (program failure).

**Program Failure**

For the intervention studied in this thesis, clear signs of a program failure were detected. As described in Chapter 5, only 33% of all participants who were exposed at least once to the intervention (and did actually see the website) used the intervention as intended. This means that, for several reasons that are elucidated in Chapter 5 of this thesis, the majority of claimants did not find the website appealing enough to (keep on) use it. Consequently, effectiveness was dimmed by this failure in the program. A maybe even more important issue, which had consequences for the effectiveness of the intervention, was the low participation rate. Merely 9% of the approached claimants were interested in using the website www.wiagesprek.nl. This finding indicated that, even if the intervention itself would be highly efficacious, this would mean that, on a population level, we still would not find any signs of effectiveness (see Chapter 6). Although a low level of participation has nothing to do with the contents of the program itself, and, therefore, possibly be better described as an ‘implementation failure’, in general, we have to conclude that aspects involving the implementation of the program were, at least for a part, responsible for not finding an effect.

**Reasons for an implementation/program failure**

First and foremost, the crude reality is that many Internet interventions simply deal with a high rate of non-usage. The intervention www.wiagesprek.nl was no exception. In a landmark paper, Eysenbach distinguishes two possible reasons for an intervention not being effective: either the theoretical idea and hypotheses behind the intervention were wrong (theory failure), or the intervention itself was so poorly adopted by its target population that, even if the theory behind it was right, it could not possibly be effective (program failure). In analogy with, for example, clinical research on the effectiveness of a new medicine, this would mean that it would not help if the patient would take this medicine if it was not effective (theory failure), and it would not have helped that the medicine had an effect if the patient would not have taken it (program failure).

**Theory Failure?**

Since a program failure is evident, the question that rises now is: would the intervention be effective if its reach was optimal and all participants did use the intervention as intended? To answer this question, three logical steps need to be clarified:

- **A** were intervention users empowered by www.wiagesprek.nl?
- **B** did this lead to different behaviour during the disability assessment?
- **C** did different behaviour lead to more successful end-points (i.e. claimant satisfaction or perceived justice)?

To answer question **A**, subgroup (per-protocol) analysis in Chapter 7 of this thesis taught us that users of the intervention were more empowered before the disability assessment (context-specific), and exhibited a more pro-active way of coping, indicating that the intervention itself did indeed empower claimants towards their assessment. So, yes, using the intervention did lead to more empowered claimants before the assessment. With regard to question **B**, physicians were asked how active the claimants’ role was during the assessment. Since dose-response relationships were found on this outcome (more intervention usage
was associated with higher active participation during the assessment, it made us conclude that using www.wiagesprek.nl also led to a different behaviour during the assessment. Finally, in question C), per-protocol analysis revealed no consequences of more empowered claimants in terms of better satisfaction and perceived justice, indicating that these outcomes were not related to intervention use. Thus, the intervention did cause claimants to be more empowered towards and during the assessment, but this shift had no further effects on our end-points. Consequently, we have to conclude that our beforehand hypothesized working mechanism was probably partly wrong, and that there was, in part, also a theory failure [or model error]. In more detail, Figure 1 shows the hypothesized model with red crosses indicating hypotheses that turned out to be wrong and with the green curls indicating hypotheses that could be confirmed.

Figure 1. Hypothesized working mechanism of www.wiagesprek.nl. Green curls display hypotheses that came out, red crosses displays hypotheses that did not.

Reasons for a theory failure
Giving reasons for a theory or model failure is complicated. The main question that needs to be answered in this light is: Why did empowerment of claimants not lead to better satisfaction or perceived justice? One aspect that could relate to finding a theory failure is a possible misconception about the relative share a claimant has in improving the insurance physician-claimant relationship. As is known from UWV reports 42, variance in claimant satisfaction and perceived justice are largely explained by: 1) the way the physician addresses the claimant, and, even more importantly, 2) the outcome of the assessment. Since claimants do not have much influence on the way a physician is addressing them, and our empowerment intervention was, by all means, not aimed at increasing claimants’ chances of getting a disability benefit, the relative advantages of changing the claimants’ role could be rather small. Perhaps political context and disability legislations, as well as the professional attitude of insurance physicians, are too decisive in this context. Another thing that comes in mind when explaining a theory failure has possibly something to do with the adverse effect of the intervention we found on perceived procedural justice. Qualitative information revealed that, in some cases, claimants who prepared themselves extensively and, for example, brought along extra medical information with them to the assessment, were disappointed when physicians did not address this extra information seriously. To quote a claimant:

“With the help of the website I made a short overview of all my medical treatments, medication, and the problems I encounter during work. […] At the beginning of the assessment I handed this over to the physician and, surprisingly, the physician rejected it and told me that this information was not important to him! I could not believe it! Was all this time I spent on preparing myself pointless?”.

Cases like these indicate that you can empower claimants as much as you like, but, if physicians do not adapt to this new, empowered claimant, it will not lead to more successful outcomes – and maybe even worse – it might lead to adverse effects. Therefore, in general, it is possible that empowerment of patients should always go hand-in-hand with some kind of intervention directed at physicians. As the authors of a systematic review on patient-centred interventions stated: “focussing on the patient alone may not produce the best benefits” 43. According to these authors, “patient directed interventions should be accompanied by a parallel training aimed at clinicians”. With hindsight, in the specific trial described in this thesis, therefore, we maybe should have focussed more on the physicians’ role and its adaptation towards a more empowered claimant. A possible way to do this is, for example, by incorporating specific elements into a standardized communication training for insurance physicians. Recently, van Rijssen et al. developed a training for insurance physicians. As part of such a training, it could be helpful to include, for example, role playing exercises on how to deal with empowered claimants.

As to the consequences of the theory failure described above, it means that, if the intervention was delivered optimally, this would not result in a change in the green curls and red crosses displayed in Figure 1. Imagine an empowerment-based intervention delivered face-to-face, in which claimants would receive one-on-one assistance by a work disability expert of the labour union. This expert would visit claimants in the week before the disability assessment, in 2 hour, daily sessions. In these visits, the assistant would help to prepare claimants for the assessment and he or she would discuss the same issues that are included in the website www.wiagesprek.nl. Even this high-intensity intervention, although it would probably raise levels of empowerment much higher compared to the Internet version, would not have demonstrated all a-priori hypothesized effects.
Comparison with other studies

Since our study found no effects of empowering disability benefit claimants in the context of insurance medicine, it is interesting to know what other studies found. Because there is a tremendous amount of literature available on patient empowerment, and many studies focused on the effectiveness of empowerment-based interventions in a broad range of medical contexts, only some specific topics are highlighted that show similarities with our study.

Empowerment in insurance and occupational medicine

To the best of our knowledge, our study is the first study available that evaluated an intervention aimed at empowerment of disability claimants, and the first study that focused on empowerment in the field of insurance medicine. The unique combination of the setting (insurance medicine), the intervention (eHealth) and the outcome (empowerment) makes it difficult to make comparisons with other studies. A research field closely connected with insurance medicine is occupational medicine. In this area, some research on empowerment-based interventions was previously conducted. Among workers with chronic diseases, an empowerment-based study was performed, aimed at job retention 19. In this intervention study, workers were provided with therapist-led group training sessions that focused on gaining knowledge, self-awareness and self-efficacy. Themes such as the consequences of a chronic disease in the workplace, feelings and thoughts about having a chronic disease, and communication in daily work situations were discussed in these group sessions. Results of this study have indicated that the intervention had a significant positive effect on self-efficacy 19. As an interesting side note, the author of this study stipulate that an empowerment based training might fail when the workers’ environment is not cooperating 19. As such, workers with chronic diseases can be empowered, but if colleagues or employers do not “receive” this empowered behaviour adequately, it might not work. Parallel to our study findings, this might indicate that empowerment-based interventions preferably should not be delivered solely to patients or disabled workers, but in stead should incorporate the patients’ environment (either an insurance physician or an employer). In another study aiming at employees on sick leave because of adjustment disorders, an empowerment-based intervention was developed 20. This intervention comprised a graded activity approach combined with stress inoculation training (a form of cognitive behavioural treatment). During the intervention, patients’ own responsibility and active role in the recovery process was emphasised. Although successful on increasing return to work and shortening sick leave, results from this study indicated that the intervention was not effective on mastery, an outcome frequently associated with empowerment 20. As far as we know, the results of these two more studies are currently being conducted in which empowerment-based interventions are delivered in an occupational setting 21,22. Results of these studies are due.

Empowerment prior to physician-patient contact

In contrast to the dearth of well-studied empowering interventions in insurance and occupational medicine, literature dealing with empowerment-based interventions prior to physician-patient contact is abundant. Much work has been done on promoting patient participation in the consultation process. Little and colleagues 23 investigated what the effects were of handing out activating leaflets to empower patients prior to primary care consultations. In these leaflets, patients were encouraged to list issues they wanted to raise, and an explanation was given on the fact that the doctor wanted them to be able to talk, discuss, and ask questions about any problems they were concerned about. Results from this study indicated that the empowering leaflets had a significant positive effect on patient satisfaction and their perception of communication with the physician. In another intervention study by Tennstedt and colleagues 24, older patients were exposed to a 2-hour group program, in which role-playing exercises, question asking and awareness training were included. Although the majority of the patients did not show increases in active participation during the visit with the physician, a positive effect of this empowering intervention was found on patient satisfaction. In a systematic review on the effectiveness of interventions for patients before consultations, the outcomes question asking, patient satisfaction, knowledge, and anxiety were examined 25. In this meta-analysis, Kinnersley and colleagues found statistically significant improvements in question asking and patient satisfaction after patients made use of interventions before consultations. Overall, patient satisfaction, an outcome also measured in our trial, was only slightly improved (standardized mean difference [SMD] = 0.09, 95% CI 0.09 to 0.16) within 17 studies after using these interventions, with only four studies including the Little et al. and Tennstedt et al. studies showing significant improvements.

With concern to the outcome empowerment, to our knowledge, no efforts have been made so far that explicitly measured this outcome. In a review by Haywood 26, however, 27 studies were found that examined the effects of interventions delivered prior to consultations on the outcome self-efficacy. From these studies, in which the intervention of interest varied from a simple checklist to intensive group education sessions, only six studies found significantly positive effects on patients’ self-efficacy.

When summarizing evidence in the field of patient-physician interaction, one can conclude that, in clinical care, the benefits of interventions aimed at patient empowerment prior to consultations seems to be limited. Although some successes have been made, in general, interventions prior to physician-patient contact do not have a major impact. As a possible explanation for finding no strong effects, Kinnersley and colleagues 21 suggested that focusing on the patient alone may not produce the best benefits for patients because of the complexity of the dialogue between patients and clinicians. A combined approach, in which patients are encouraged to actively participate in their consultations, and clinicians have the skills to identify and adapt to the needs of their patients, is proposed by these authors. To support this idea, a recent Cochrane review concluded that combined interventions aimed at both providers and patients showed slightly better results on, for example, the outcome patient satisfaction, compared to interventions directed solely at care providers 27. Moreover, a study in which patient participation during an oncologist visit was promoted by using question prompt sheets, adverse effects were found in the case the oncologist did not address this prompt sheet with his or her patient 28. Once the oncologist was considered a part of the intervention, and he or she did address the prompt sheet with the patient, the results turned out to be positive.

In conclusion, literature on the physician-patient relationship suggests that “it takes two to tango” interventions to improve this relationship should involve and delivered to both the physician and the patient.

eHealth

Besides the subject insurance medicine and the physician-patient relationship, an important aspect of this thesis is that it includes the evaluation of an eHealth delivered intervention. According to many experts the time has come, on a large scale, embed eHealth in the health care system. As Neelie Kroes, the European Commissioner for Digital Agenda, stated: “families demand it, citizens expect it, and the technology is ripe” 30. Despite this enthusiasm, however, little scientific evidence is available on the effectiveness of eHealth technologies. An example is the systematic review that is presented in Chapter 2 of this thesis. This review, evaluating the effectiveness of web-based intervention on the outcome patient empowerment, showed no strong and convincing evidence in favour of web-based or eHealth interventions. For eHealth in general, evidence on the proposed advantages of this innovative and much-promising medium turns out to be scarce. High-quality RCTs are lacking, and in studies where positive effects were found, many times these only could be applied to a specific sub-group of patients. As was recently stated in a review by Black and colleagues 31, there is “a large gap between the postulated and empirically demonstrated benefits of eHealth technologies”. However, despite eHealth benefits are frequently being overrated by, what Black and colleagues call “techro-enthusiasts”, there are signs that the quality of eHealth evaluations is beginning to improve with regards to methodological rigour 32. Thus, a clearer picture of the exact advantages of eHealth technologies”. However, despite eHealth benefits are frequently being overrated by, what Black and colleagues call “techro-enthusiasts”, there are signs that the quality of eHealth evaluations is beginning to improve with regards to methodological rigour 32. Thus, a clearer picture of the exact advantages of eHealth technologies. An example is the systematic review that is presented in Chapter 2 of this thesis. This review, evaluating the effectiveness of web-based intervention on the outcome patient empowerment, showed no strong and convincing evidence in favour of web-based or eHealth interventions. For eHealth in general, evidence on the proposed advantages of this innovative and much-promising medium turns out to be scarce. High-quality RCTs are lacking, and in studies where positive effects were found, many times these only could be applied to a specific sub-group of patients. As was recently stated in a review by Black and colleagues 31, there is “a large gap between the postulated and empirically demonstrated benefits of eHealth technologies”. However, despite eHealth benefits are frequently being overrated by, what Black and colleagues call “techro-enthusiasts”, there are signs that the quality of eHealth evaluations is beginning to improve with regards to methodological rigour 32. Thus, a clearer picture of the exact advantages of eHealth can be expected in future research. In line with these tendencies, a new CONSORT statement is currently
to improve with regards to methodological rigour. Thus, a clearer picture of the exact advantages of eHealth can be expected in future research. In line with these tendencies, a new CONSORT statement is currently being constructed, specifically aimed at improving and increasing transparency of eHealth studies.

With more high quality work available, in the future it will become clear to what extent eHealth can serve as a supportive medium for health care. Meanwhile, in a recently published thesis “Grounding eHealth” by Nijland, a holistic framework has been proposed to help researchers develop sustainable eHealth technologies. Some interesting points were brought up that can help improve eHealth technology development in the future. Examples are the emphasis Nijland put on the fact that developing eHealth technologies should be “a participatory process of co-creation”, in stead of a process solely focussing on, for example, a certain patient group without taking into account the patients’ environment, and without letting the patient herself be a part of the development process. Furthermore, some ideas exist that the adherence problem in eHealth should be addressed by making these technologies more persuasive. In this light, a guideline will be soon available to assist researchers and developers in improving the impact of eHealth technologies.

Implications for practice

Considering the intervention www.wiagesprek.nl in its current form:

• For patients, patient organizations or offices looking after claimants’ interests:

   If applicable to the patient, the website www.wiagesprek.nl helps to increase knowledge about complicated disability assessment procedures and disability legislation. Although besides information, the website gives several tools that can be helpful in preparing oneself for the disability assessment, these tools will not necessarily lead to a better or a more satisfying assessment. Patients using these ‘extra’ tools, such as making a medical record and taking this along to the assessment, should take into account that in some cases these extra efforts will not be appreciated by the insurance physician.

• For insurance physicians who perform disability assessments:

   If implemented in the Netherlands, physicians will, on a large scale, not see the results from www.wiagesprek.nl. This is largely caused by the fact that many claimants will not be interested in consulting the website before their assessment. Claimants who will use the website www.wiagesprek.nl will have more knowledge on disability assessment procedures and legislation. Although this can have some advantages, such as not having to explain the procedures during the assessment itself, altogether, it does not lead to a clear improvement in working with claimants. In some cases, claimants who extensively prepare themselves with www.wiagesprek.nl will bring extra information with them to the assessment, and in some cases these extra efforts will not be appreciated by the insurance physician.

Conclusions

The results of this thesis, and corresponding literature in the field, give implications that can possibly assist researchers in their future work. For insurance medicine practice some further implications are given on basis of the results of this thesis.

Implications for future research

• Empowerment interventions aimed at patients, that are developed to enhance the physician-patient relationship, should incorporate the physicians’ role. Together with existing literature on physician-patient contact, the study described in this thesis implies that, to obtain [maximum] benefits, it seems necessary to involve physicians in an intervention. Not only by consulting physicians in the development phase of an intervention, but also by separately intervening on physicians. Empowering patients changes the physician-patient power balance. If the physician does not adapt to this new patients’ attitude, empowering patients prior to medical consultations might be a waste of time.

• Measuring empowerment in research is tricky. As long as the concept empowerment is not fully operationalized, and no properly validated instrument exists to measure it, researchers should be careful in including it in their (primary outcome) measurements. Self-efficacy, a much more robust concept, is a good alternative. Many consider self-efficacy to be a key element in the empowerment process. Within the context of a specific research setting, it is recommendable to use validated disease-specific or context-specific self-efficacy scales.

• Researchers should be aware of the fact that compliance or adherence with eHealth interventions is usually very low, especially when dealing with a ‘difficult’ group of patients (e.g. lower educated, low literacy, long-term disabled). Proving an intervention effect on a population level is thus hard to accomplish. Therefore, to increase insight into the exact working mechanisms of a web-based intervention, and to find out for who the intervention does work, it is recommended to include detailed compliance measures into a trial. Given the fact that Internet interventions easily allow for objective tracking of program use, or so-called paradata, it would be a missed opportunity not to do so. Furthermore, to maximize adherence, extra effort and time should be spend on involving the end-user and its environment in the developing phase of an intervention.

Implications for practice

Considering the intervention www.wiagesprek.nl in its current form:

• For patients, patient organizations or offices looking after claimants’ interests:

   If applicable to the patient, the website www.wiagesprek.nl helps to increase knowledge about complicated disability assessment procedures and disability legislation. Although besides information, the website gives several tools that can be helpful in preparing oneself for the disability assessment, these tools will not necessarily lead to a better or a more satisfying assessment. Patients using these ‘extra’ tools, such as making a medical record and taking this along to the assessment, should take into account that in some cases these extra efforts will not be appreciated by the insurance physician.

• For insurance physicians who perform disability assessments:

   If implemented in the Netherlands, physicians will, on a large scale, not see the results from www.wiagesprek.nl. This is largely caused by the fact that many claimants will not be interested in consulting the website before their assessment. Claimants who will use the website www.wiagesprek.nl will have more knowledge on disability assessment procedures and legislation. Although this can have some advantages, such as not having to explain the procedures during the assessment itself, altogether, it does not lead to a clear improvement in working with claimants. In some cases, claimants who extensively prepare themselves with www.wiagesprek.nl will bring extra information with them to the assessment, and in some cases these extra efforts will not be appreciated by the insurance physician.
The question of whether or not to implement the intervention www.wiagesprek.nl in practice remains. Although, from a research perspective, it seems unwise to, nationwide, implement an intervention of which no clear beneficial effects are found, one still can argue about it. In practice, it is not uncommon that interventions, guidelines, or therapies are implemented that scientifically have not (yet) been proven effective. This would suggest that, for practice, sometimes other arguments than scientific ones play an important role in the decision to implement an intervention or not. Figure 2 sums up some arguments that can be used for or against implementation of the intervention www.wiagesprek.nl. Based on this thesis, some evidence exist that, if policy makers should decide to implement www.wiagesprek.nl, they cannot expect that this website would serve as an effective empowerment tool. However, www.wiagesprek.nl could be used as an informative tool for disability benefit claimants in the Netherlands.

Figure 2. Overview of arguments for - or against - implementation of the intervention www.wiagesprek.nl

(a), as described in Chapter 6
(b), as described in Chapter 7
(c), as described in Chapter 5

Both UWV

The efficiency of the disability assessment procedure is not affected by www.wiagesprek.nl. The number of objections and complaints will not be affected. UWV policy makers who are considering implementation of www.wiagesprek.nl cannot expect that this website would serve as an effective empowerment tool. However, it could be used as an informative tool for disability benefit claimants in the Netherlands. If implemented, UWV should bear in mind that, annually, only about 1200 claimants in the Netherlands (3% of all claimants) will use the website thoroughly.

NB: There is a growing acceptance that evaluation of an eHealth intervention should ideally be approached as a longitudinal process occurring through a series of overlapping and iterative stages relevant to the maturity of the technology in its lifecycle, from initial conception to rollout. As is usually the case in product development a certain product is made, evaluated and then improved before going through the same cycle again. Developing an effective product, therefore, is a process of constant improvement. In this light it is perhaps worthwhile to, on a small scale, retest www.wiagesprek.nl after some improvements have been made. In this ’WIAgesprek 2.0’ changes can be made as to the implementation strategy, the intervention itself, a physician component can be incorporated into the intervention. Possibly, this might lead to more successful outcomes than the ones described in this thesis.

Implementation

The question of whether or not to implement the intervention www.wiagesprek.nl in practice remains. Although, from a research perspective, it seems unwise to, nationwide, implement an intervention of which no clear beneficial effects are found, one still can argue about it. In practice, it is not uncommon that interventions, guidelines, or therapies are implemented that scientifically have not (yet) been proven effective. This would suggest that, for practice, sometimes other arguments than scientific ones play an important role in the decision to implement an intervention or not. Figure 2 sums up some arguments that can be used for or against implementation of the intervention www.wiagesprek.nl. Based on this thesis, some evidence exist that, if policy makers should decide to implement www.wiagesprek.nl, they cannot expect that this would serve as an effective empowerment tool. However, www.wiagesprek.nl could be used as an informative tool for disability benefit claimants in the Netherlands.
Summary
In daily insurance medicine practice, disability benefit claimants undergo medical disability assessments, performed by insurance physicians. For a large part, these assessments determine if a claimant will receive a disability benefit, and what the amount of this benefit will be. The patient-physician relationship is complicated by several issues in this specific context, sometimes resulting in dissatisfaction and feelings of injustice among claimants, which expresses itself in claimants filing complaints about physicians, and objecting to the outcome of the assessment. This thesis’ main focus is to improve the insurance physician-claimant interaction by intervening on the claimant. For this purpose, the idea of patient empowerment was used. Empowerment refers to a process by which people gain control over affairs that matter to them. Through the interactive web-based intervention www.wiagesprek.nl we tried to empower disability claimants, prior to disability assessments. The effectiveness of www.wiagesprek.nl was evaluated in this thesis.

First, in Chapter 2, we tried to answer the question: are web-based interventions generally effective in increasing patient empowerment? In order to answer this question we performed a systematic review. Fourteen RCT studies were included, which were heterogeneous with regard to included patients, types of interventions, follow-up period, and measured outcomes. After statically pooling on included outcome measure, it was found that, in comparison with usual care or no care, web-based interventions had a significant positive effect on empowerment measured with the Diabetes Empowerment Scale, on self-efficacy measured with disease-specific self-efficacy scales, and on mastery measured with the Pearlin Mastery Scale. No effects were found for self-efficacy measured with general self-efficacy scales or for self-esteem measured with the Rosenberg Self-Esteem Scale. Because of the low quality of evidence we found, however, these results should be interpreted with caution. The clinical relevance of the positive findings can be questioned as well, because the significant effects we found were, in general, small.

As in Chapter 2 it was revealed that not many studies measure empowerment explicitly (an exception was the Diabetes Empowerment Scale). Chapter 3 describes the development of a new instrument to measure empowerment. This ‘VrijBaan’ questionnaire measures empowerment among people with a long-term work disability. First, a six-dimension (competence, self-determination, meaning, impact, positive identity and group orientation) empowerment model was chosen as a theoretical framework. A literature search was then conducted to find instruments that already were being used to measure one or more of these constructs. Validated and applicable instruments from this search were consequently used in a preliminary questionnaire. Then, a pilot test was conducted consulting the target population and experts, and a concept questionnaire was conducted. In a field test, this questionnaire was sent to 876 subjects who followed a vocational rehabilitation course in the years 2001-2003. Item-total correlations and factor analyses were performed on the collected data to reduce the number of items. Factor analysis was performed, and internal consistency was determined to get insight into the psychometric properties of the final questionnaire. Item reduction by item-total correlations and factor analysis resulted in a final questionnaire consisting of 62 items divided over the six subscales. Internal consistency of the subscales was found to be good. Despite this positive result, further psychometric work is needed to gain insight into the validity of this questionnaire and to further improve it.

Chapter 4 describes the development of www.wiagesprek.nl and how its effectiveness was evaluated. To develop www.wiagesprek.nl, the so-called Intervention Mapping (IM) protocol was used as a supportive tool. A needs assessment was carried out among the target population and relevant stakeholders. Semi-structured interviews were held with insurance physicians, labour experts and patient organizations, and a survey was conducted among disability claimants. With the information obtained from these initiatives and on basis of literature, an initial idea for the intervention was developed and program objectives were formulated. Initial ideas were tested in several focus groups, with claimants and insurance physicians separately. A beta version of www.wiagesprek.nl was available in September 2008, which was pilot tested. After this pilot test, in which users’ feedback was collected, the intervention was improved. The final version of www.wiagesprek.nl consisted of: 1) five interactive modules in which claimants are prepared step-by-step for their disability assessment (estimated walk-through time 120-150 minutes), 2) general information about Dutch social security arrangements and disability assessment procedures, and 3) a forum in which experiences between claimants could be exchanged. From January 2009 until February 2010 a randomized controlled trial (RCT) was conducted to evaluate the effectiveness of the intervention. Primary outcome was empowerment, measured with the ‘VrijBaan’ questionnaire, a context-specific empowerment scale; general self-efficacy, and mastery. Secondary outcomes included knowledge, coping, active participation, claimant- and physician satisfaction, and claimants perceived justice. Additionally, a process evaluation was conducted alongside the RCT.

In Chapter 5, this process evaluation revealed the following: First, the interventions reach was low. From the 2780 approached disability claimants, only 242 (9%) participated in the trial. Although no information was available on most non-participants, reasons for non-participation that were most mentioned were: not having access to the Internet or an email address, and not willing to fill out questionnaires that were part of the trial. Once participating, claimants not always used the intervention as intended: surprisingly, 33% never logged on to the website after enrolment. On the other hand, 32% used the intervention for more than 2 hours. Reasons for non-compliance were: a lack of time to use the website before the assessment and a lack of need to extensively prepare for the assessment. As compliance was ambiguous, claimants that actually used the intervention were satisfied. Also, they perceived the intervention to be effective in order to gain knowledge about disability legislation and procedures, in gaining right expectations towards the assessment, and in order to communicate effectively with their physician. In the process evaluation claimants gave suggestions for improving www.wiagesprek.nl. Altogether, the conducted process evaluation gives implications to improve aspects in the implementation strategy of the intervention and to the intervention itself. These improvements are imperative to enhance the interventions uptake in the future.

Chapter 6, the most important chapter of this thesis, describes the effectiveness of www.wiagesprek.nl. In the RCT, claimants were randomly assigned to an intervention group (n=123) or a control group (n=119). Participants who were randomized into the intervention group were able to logon to the website www.wiagesprek.nl. Participants from the control group were directed to a ‘sham’ website with commonly available information only. Outcomes were assessed at baseline, 2 days before the disability assessment, as well as 1 day, 6 weeks, and 4 months after the disability assessment. Results from the RCT indicated that the intervention had no significant short- and long-term effects on empowerment, but the intervention increased claimants’ knowledge significantly compared to the control group. Claimant satisfaction with the disability assessment interview and claimant perceived justice on the outcome of the assessment were lower in the intervention group (statistically not significant). Furthermore, the intervention had a significant negative effect on claimants perceived procedural justice.

As compliance with the intervention was low, it was interesting to find out whether, under the condition that is being used, www.wiagesprek.nl was effective. To examine these interventions’ so-called ‘efficacy’, Chapter 7 describes conducted subgroup (per-protocol) analysis. To estimate efficacy, several sub-groups were analyzed on basis of different compliance measures. Dose-response relationships were investigated by using total time registration data. Predictors of compliance were additionally determined using a stepwise backward linear regression technique. On basis of the per-protocol analysis it was found that the intervention did not have a significant positive effect on empowerment. However, knowledge, general self-efficacy, coping and active participation were significantly higher among high-compliant subgroups, compared to controls. The intervention had an adverse effect on claimants’ perceived procedural justice. Dose–response relationships were found for context-specific empowerment, knowledge, coping and claimants’ active participation. Being born in the Netherlands and feeling helpless towards the disability assessment predicted high compliance.
In the General Discussion the results from this thesis are summarized. The overall conclusion is that www.wiagesprek.nl cannot be considered an effective empowerment tool, but it can serve as an effective information source for disability claimants in the Netherlands. The most important reason for a lack of effect on empowerment is the high rate of participant non-use and non-participation. Furthermore, it seems that by focusing solely on claimants in the complex context of the claimant-insurance physician interaction, expected benefits can not be reached. Practice implications are given to possibly improve effectiveness in the future.

Samenvatting
Dit proefschrift beschrijft een onderzoek dat zich afspeelt binnen de verzekeringsgeneeskunde. Een belangrijk onderdeel van de verzekeringsgeneeskunde is de beoordeling van arbeidsongeschiktheid bij mensen die bijna 2 jaar verzuimen van hun werk. In Nederland gebeurt dit in het kader van de Wet Werk en Inkomen naar Arbeidsvermogen (WIA). Tijdens een arbeidsongeschiktheidsbeoordeling wordt bepaald of een cliënt een arbeidsongeschiktheidsuitkering ontvangt en hoe hoog deze uitkering wordt. Een belangrijk aspect van de beoordeling is het gesprek dat een cliënt heeft met een verzekeringsarts. In dit WIA-gesprek bekijkt de arts of de cliënt op medische gronden in staat is om te werken. In de praktijk leveren deze gesprekken veel discussie op. Regelmatig voelen cliënten zich onrechtvaardig behandeld en zijn ze ontevreden over het gesprek met de arts. Daardoor dienen cliënten klachten in over de arts en tekenen cliënten bezwaar aan tegen de uitslag van de beoordeling.

In een poging deze problemen te voorkomen is de website www.wiagesprek.nl ontwikkeld. Het doel van deze interventie is het verbeteren van de cliënt-verzekeringsarts interactie door cliënt empowerment. Empowerment is een proces waarbij een individu controle ervaart over een situatie die voor hem of haar belangrijk is. De centrale vraag in dit proefschrift is of de interventie www.wiagesprek.nl als een effectief middel kan worden ingezet in de verzekeringsgeneeskunde.

In Hoofdstuk 2 van dit proefschrift is allereerst een literatuuronderzoek gedaan waarin gekeken is of interventies via het internet in het algemeen in staat zijn om empowerment bij patiënten te vergroten. Uit een literatuuronderzoek zijn daarom 14 gerandomiseerde gecontroleerde onderzoeken (RCTs) met elkaar vergeleken. Veel verschillen zijn er tussen deze RCTs te vinden met betrekking tot de onderzochte patiënten-groepen, type interventie, timing van de metingen en de gemeten uitkomstmaat. Nadat per gemeten (empowerment gerelateerde) uitkomstmaat de onderzoeken zijn samengevoegd in een meta-analyse kwamen de volgende resultaten naar boven: online interventies hebben over het algemeen een significant positief effect op empowerment (gemeten met de Diabetes Empowerment Schaal), op ‘self-efficacy’ (gemeten met ziekte specifieke instrumenten) en op ‘mastery’ (gemeten met de Pearlin Mastery Schaal). Geen effecten werden gevonden op ‘self-efficacy’ (gemeten met algemene instrumenten) en zelfvertrouwen. Door een gebrek aan bewijskracht moeten deze resultaten echter voorzichtig geïnterpreteerd worden. Verder kunnen vraagtekens gezet worden bij de klinische relevantie, aangezien de positieve effecten vaak klein waren.

In Hoofdstuk 3 is de ontwikkeling beschreven van een nieuw empowerment meetinstrument dat is ontwikkeld door het REA-college Nederland. Deze VrijBaan Empowerment vragenlijst meet empowerment bij langdurig arbeidsongeschikten. Bij de ontwikkeling van dit meetinstrument is uitgegaan van een theorie die stelt dat empowerment uit 6 dimensies bestaat, te weten: competentie, zelfbeschikking, betekenis, impact, positieve identiteit en groepsorientatie. Een literatuuronderzoek is uitgevoerd om bestaande instrumenten te vinden die reeds één van deze dimensies beogen te meten. Gevalideerde en toepasbare instrumenten zijn geselecteerd en samengevoegd in een eerste conceptversie. Vervolgens is een pilot uitgevoerd met de doelgroep en deskundigen om overbodige vragen uit deze versie te schrappen en nieuwe toe te voegen. Hierna is de vragenlijst verstuurd naar 976 cliënten van een revalidatiecentrum. Item-totaal correlaties en factor analyses zijn uitgevoerd op de verzamelde gegevens om het aantal items te verminderen. Resultaat is een definitieve vragenlijst, bestaande uit 62 vragen verdeeld over 6 subschalen. De interne consistentie van de subschalen is goed gebleken. Ondanks dit positieve resultaat zijn verdere inspanningen nodig om een beter inzicht te krijgen in de validiteit van de VrijBaan vragenlijst.

Hoofdstuk 4 beschrijft de ontwikkeling van de online interventie www.wiagesprek.nl en hoe deze op effectiviteit is geëvalueerd. In de ontwikkeling van www.wiagesprek.nl is het zogenaamde ‘Intervention Mapping’ protocol gebruikt. Eerst is een uitgebreide behoeftepeiling gedaan onder de doelgroep en betrokken partijen. Semigestructureerde interviews zijn gehouden met verzekeringsartsen, arbeidsdeskundigen en
patiëntenorganisaties. Vervolgens is bij 42 UWV cliënten een vragenlijst afgenomen. Samen met het in hoofdstuk 2 besproken literatuuronderzoek is informatie uit deze behoeftepeiling gebruikt om een conceptueel plan van de interventie te ontwikkelen en programma doelen te beschrijven. Een beta versie van www.wiagesprek.nl was beschikbaar in september 2008. Deze beta versie is in een pilot getest door 51 UWV-clients en verbeterd op basis van gebruikersfeedback. De definitieve versie van www.wiagesprek.nl bestond uiteindelijk uit: 1) vijf interactieve modules die cliënten stap voor stap voorbereiden op het beoordelingsgesprek bij UWV (doorlooptijd 120 tot 150 minuten), 2) algemene informatie over arbeidsongeschiktheids-beoordelingen en wetgeving, en 3) een forum waarin deelnemers ervaringen kunnen uitwisselen. Van januari 2009 tot en met februari 2010 heeft een gerandomiseerd gecontroleerd onderzoek (RCT) plaatsgevonden. Primair uitkomstmaat hierbij was empowerment, gemeten met de ‘VrijBaan’ vragenlijst, een context-specifieke empowerment schaal, algemene self-efficacy en mastery. Secondaire uitkomsten betreffen: kennis, coping, actieve participatie, cliënt- en arts-tevredenheid en ervaren rechtvaardigheid. Parallel aan het onderzoek is een procesevaluatie uitgevoerd.

In Hoofdstuk 5 is deze procesevaluatie beschreven. Hieruit bleek dat het bereik van www.wiagesprek.nl laag is: van de 7280 aangeschreven cliënten, deden slechts 2142 (29%) mee aan het onderzoek. De voornaamste reden waarom cliënten niet aan het onderzoek meededen was het niet beschikken over een internetverbinding. Deelnemers waren hoger opgeleid, vaker vrouw en minder vaak allochtoon vergeleken met de gemiddelde Nederlandse UWV-cliënt. Bij de 123 deelnemers uit de interventiegroep is www.wiagesprek.nl niet altijd goed gebruikt: 31% legde nooit in na aanmelding voor het onderzoek. Slechts een minderheid van 32% gebruikte de interventie gedurende meer dan 2 uur. Veel voorkomende redenen voor non-gebruik zijn: een te korte tijd tussen aanmelding en het beoordelingsgesprek en een geringe behoefte aan een intensiveervoorbereiding. UWV-clients die de interventie hebben gebruikt waren erg tevreden over de website. Verder gaven deelnemers aan dat ze door www.wiagesprek.nl veel kennis hebben opgedaan en beter in staat zijn om effectief met hun arts te communiceren. Al met al geeft de procesevaluatie implicaties om de implementatie strategie en de website zelf te verbeteren. Deze verbeteringen zijn nodig om de toekomst meer UWV-clients te interesseren voor www.wiagesprek.nl en dat deze site beter gebruikt zal worden.

In Hoofdstuk 6 is het belangrijkste hoofdstuk van het proefschrift. In dit hoofdstuk is de effectiviteit van www.wiagesprek.nl besproken. In een gerandomiseerd gecontroleerd onderzoek (RCT) werden cliënten random verdeeld in een interventiegroep (n=123) of een controlegroep (n=119). Deelnemers uit de interventiegroep kregen toegang tot de website www.wiagesprek.nl. Deelnemers uit de controlegroep werden verwezen naar een ‘plaatsbo’ website met alleen standaard beschikbare informatie. Uitkomstmaten werden bepaald tijdens een nulmeting, 2 dagen voordat de cliënt een WIA-gesprek had, en 1 dag, 6 weken en 4 maanden na dit gesprek. Resultaten van de RCT suggereren dat www.wiagesprek.nl geen korte- en lange-termijn effecten heeft op empowerment. Wel verhoogd de interventie het kennisniveau bij cliënten over de WIA(-beoordeling). Verder zijn geen effecten gevonden op cliënt tevredenheid en ervaren rechtvaardigheid. De interventie heeft een averechts effect op de door de cliënt ervaren procedurele rechtvaardigheid.

Omdat het gebruik van website laag was, werd gekeken of www.wiagesprek.nl effectief was bij een groep deelnemers die de website voldoende gebruikt hadden. Daarom zijn subgroep (peri-protocol) analyses gedaan. Deze worden beschreven in hoofdstuk 7. Om de effectiviteit onder intensieve gebruikers vast te stellen, zijn subgroepen ingedeeld op basis van vier verschillende maten van interventiegebruik: Dosis-respons relaties zijn onderzocht op basis van totale tijd registraties. Voor spellers van interventiegebruik zijn verder geraadpleegd door middel van stapsgewijze teruggewaarde lineaire regressie analyses. Op basis van de peri-protocol analyses is gebleken dat de interventie geen significant positief effect heeft op empowerment. Wel namen kennis, self-efficacy, coping en actieve participatie meer toe onder de intensieve gebruikers. De interventie heeft ook bij intensieve gebruikers een averechts effect op procedurele rechtvaardigheid. Dosis-respons relaties zijn gevonden voor context-specifieke empowerment, kennis, coping en actieve participatie. Geboren zijn in Nederland en gevoelens van hulpeloosheid voorafgaand aan het WIAG-gesprek voorspellen intensief gebruik van de website.

In de algemene discussie worden de resultaten van dit proefschrift samengevat en in een bredere context besproken. De algemene conclusie is dat www.wiagesprek.nl niet gezien kan worden als een effectief empowerment instrument in de verzekeringsgeneeskunde. Wel kan de website gebruikt worden als een effectieve informatiebron voor UWV-clients in Nederland. De belangrijkste reden voor het tegenvallende effect op empowerment is het lage bereik van de website en de hoge mate van non-gebruik. Verder is het mogelijk dat, gegeven de complexe context van arbeidsongeschiktheids-beoordelingen, het alleen focussen op de cliënt niet voldoende is om de beste resultaten te halen. De verzekeringmaatschappij moet zijn/haar gedrag ook aanpassen aan de empoverde cliënt. Praktische implicaties worden ten slotte gegeven om de effectiviteit van www.wiagesprek.nl in de toekomst mogelijk te verbeteren.
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UWV erg bedankt voor het faciliteren van het onderzoek. In het bijzonder Diederik: als onderzoek coördinator bij UWV was je geweldig! Van het versturen van onderzoeks-brochures tot het regelen van focus groepen: UWV bedankt voor je overname van deze taken. UWV bedankt voor de coördinatie en ontspannen halfjaargesprekken.

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Deelnemers en UWV bedankt voor jullie deelname aan het onderzoek. Ondanks dat de periode rondom een WIA-beoordeling behoorlijk zwaar kan zijn vonden jullie toch tijd en energie om (soms lange) vragenlijsten in te vullen voor het onderzoek. UWV bedankt voor het faciliteren van het onderzoek. In het bijzonder Diederik: als onderzoek coördinator bij UWV was je geweldig! Van het versturen van onderzoeks-brochures tot het regelen van focus groepen: UWV bedankt voor je overname van deze taken. UWV bedankt voor de coördinatie en ontspannen halfjaargesprekken.

Kenniscentrum Verzekeringsgeneeskunde
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Mijn nieuw werkgever NETQ. Wat een geweldig systeem hebben jullie ontwikkeld om online vragenlijsten af te nemen! Het heeft mij zeker minimaal 3 maanden promotietijd bespaard: (bijna) geen data-cleaning, met een druk op de knop al je data in SPSS: geweldig! Ben bij deel uit te maken van het NETQ team en kijk uit naar alle ontwikkelingen die nog komen gaan.

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M’n faffies van ‘way back’: Tom, Nick en Lennard. Jullie hebben (onder dat jullie het misschien doorhadden) mij geïnspireerd om m’n schouders onder een promotietraject te zetten. Vrienden uit Amsterdam, Almere, Amstelveen, Groningen en Deventer: bedankt voor alle gezelligheid en ontspanning! Chris & Patty, Maris & Klaas, Lau & kvo. ik kijk uit naar onze volgende etentjes. Frenkie, Eus en Al thanks voor de occasional O-to-the-Z borrels. US Heren 5: ik heb nog nooit zulke ontspannen 3de helften meegemaakt bij een basketbal team als bij jullie! Met speciale props voor de huisrockers Faffie, Bartje en Rosg…

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