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From clinical reasoning to ehealth interventions; a study on how nurses asses care and ehealth in home care

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ABSTRACT

The assessment of care in homecare today is complex. Nurses have to decide on care for clients with multiple health problems. Technological innovations promise solutions for support of self-management of older people. We do not know, however, how and when nurses assess eHealth. A qualitative study design was used, in which 43 homecare nurses participated in focus groups and think aloud interviews. The study shows that nurses believe a trusting relationship necessary in order to suggest eHealth interventions. Nurses say they need home visits for the assessment of eHealth. Nurses also have some strong opinions on eHealth, like the notion that eHealth isn't a fitting option for frail older people. It becomes clear that nurses need to see eHealth interventions fit for clients in a person-centred way and in close connection to health problems they've prioritised in order to assess it. Implications for practice and further research are to focus on how nurses can be convinced to assess and use eHealth in a person-centred way and how to discuss this with their clients. Next to that training and a tool that provides up to date information linked to frequently seen health problems are recommended.

1. Introduction

1.1. Assessment of care

Nurses assess care every day. It is a vital aspect of their work in which standardised nursing diagnoses can offer support. These aim to help nurses assess care and choose fitting ways in dealing with health problems (Tanner, 2006). Yet, making an informed decision on what to prioritise, what acceptable outcomes and suitable interventions to choose, is complex (Benner et al., 2008; Johnsen et al., 2016). Clinical reasoning is a cyclic process rather than straightforward decision making. The process concerns saliency for the correct cues to look for (Levett-Jones et al., 2010). Also, many aspects such as professional knowledge, perceptions of the client as well as the nurse's own perceptions, and the context in which care is taken place, need to be considered. Critical thinking skills, such as logical thinking and the ability to analyse problems and reflect on them, are supposed to be the core of clinical reasoning, although there's inconclusive evidence on the correlation between both phenomena (Lee et al., 2017). We also see nurses handle this in different ways (Zimmerman, 2017). Some nurses assess care more or less intuitively. Based on professional experience, expert nurses are able to interpret symptoms very fast. They are therefore able to arrive to conclusions about health problems based on pattern recognition. They seem to skip the steps of clinical reasoning in which relevant data of a client situation is collected systematically, but are in fact doing this unconsciously. But some nurses actually do skip steps out of lack of knowledge. Other, mostly novice, nurses do consciously use steps of clinical reasoning and check their findings in comparison to standards within classifications or terminologies in reference- or handbooks (Simmons, 2010). Internationally, well known classifications are the North American Nursing Diagnoses Association (NANDA) classification, the Nursing Outcomes Classification (NOC) and the Nursing Interventions Classification (NIC). Other classifications, such as the healthcare patterns of Marjory Gordon, can be used as a structure for assessment. Some classifications evolved from the need to have a system fit for a specific nursing domain, such as the Omaha-system for homecare. The context in which the study described in this paper took place, is the Netherlands. Assessment practices use

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NANDA, NOC and NIC as a body of knowledge as well as Carpenito's handbook and a national coreset of diagnoses developed by the Dutch Nursing Association. The Omaha-system and Gordon's health patterns are also being used frequently. Most of these classifications are integrated in electronic client record systems, which provide functionality to use these classifications. Nurses consult these in order to construct careplans for their clients (Paans et al., 2011). Unfortunately, even though nursing classifications are being validated and revised frequently and therefore nowadays include some eHealth interventions, using them do not seem to enhance the use of eHealth interventions. But, most classifications are not up to date on the latest eHealth innovations. Also, even if they were, there will always be a backlog because of the rapid development of eHealth. At the same time, these are all innovations we would like nurses to consider in daily practice.

1.2. Facing the future in homecare

Within homecare, eHealth claims efficiency for professionals and the support of self management for people who need care (Lettieri et al., 2015). All sorts of eHealth solutions are being used which effects nursing care one way or another (Rouleau, 2017). These tools aim to monitor or communicate information during care processes. eHealth as such can range from a GPS-tracking system for a person with dementia, to an application in which blood sugar levels are communicated (Peate, 2013). Definions of eHealth are subject to a lot of debate, there seems to be no consensus on the concept and it is therefore difficult to always make clear what is meant (Boogerd, Arts, Engelen and van de Belt, 2015; Showell and Nøhr, 2014). Nevertheless, eHealth has been defined as the use of information and communication technology aiming for the support and advancement of health (Eng, 2002; Oh et al., 2005). Despite this being a broad definition it does specify that the purpose should always be an adjunct to personal healthcare. This also is the focus of the research project described in this paper in which eHealth is being understood by the researchers as care-interventions for patients in which (digital) technology is being used. Next to that this study also describes what nurses themselves believe what eHealth is. This is done in the homecare setting because length of stay in hospitals is getting shorter and older clients want to live the last part of their lives in their own surroundings. Therefore, homecare is booming. Today, homecare nursing already is prone to staffing problems (Maurits et al., 2018). In that perspective, using eHealth in homecare becomes a necessity and should be encouraged. At the same time, there seems to be a gap between alleged benefits of eHealth and what happens in daily practice (Black et al., 2011). On top of that, we do not know what triggers nurses to choose for eHealth or not.

1.3. The research project and aim on eHealth

This article discusses a study which is part of an ongoing project. The project was done from July 2016 to July 2018 in the Netherlands by the research group IT-innovations in Healthcare of Windesheim University of Applied Sciences. Three regional care-organisations participate by means of providing the research sites. National stakeholders participating are the Dutch Nurses Association (V&VN), the Dutch Association of Patients Interests (Patienten federatie Nederland), the Dutch Association of Care-organisations (Actiz) and the Dutch Centre of Expertise in Long-term Care (Vilans). The project is co-financed by the National Organisation for Practice-based Research (SIA-RAAK). The overall aim is to support nurses in the assessment and use of eHealth in homecare settings. The immediate cause for the project was that eHealth did not seem to be the focus of attention for nurses and therefore was not introduced to clients. The project's results should encompass a tool and training, based on a follow-up study in a participatory design which will be steered by the results of the currently described study. In order to determine what kind of support is needed this study's was aimed to get insight in homecare nurses practices during assessments in general and in eHealth specifically.The research question therefore was 'In what way do homecare nurses assess eHealth interventions during assessment of care'.

2. Methods

2.1. Study design

An explorative qualitative design was used. First, orientation in daily nursing practice was done. Subsequently, the main part of the study took place, using Think Aloud (TA) interview sessions, some of them focussing on the use of classification systems. Finally, a focus group was performed in which preliminary results were discussed. All participating nurses were registered nurses holding either a bachelor or vocational degree, aged between 30 and 65 (average 38) and experience in practice ranging between 1 and 17 years (average 6). The study took place between September 2016 and July 2017.

2.2. Orientation

The orientation consisted of a focus group of six nurses, observations in daily practice and interviews with six homecare nurses and two clients. The orientation had several objectives. Researchers wanted to get familiar with homecare nurses' daily practices. Additionally, since homecare legislation in the Netherlands was changed after the start of the project, it was necessary to check whether the original problem statement was valid still. The observations included making field notes and provided information about nurses' responsibilities, interaction with clients and tasks. A topic list, focussing on clinical reasoning and the assessment of eHealth according to recent definitions, was used for the interviews (see Table 1.), (Krijgsman et al., 2015; Simmons, 2010).

2.3. Think aloud interviews

The Think Aloud (TA) method was used in order to derive rich in-depth data on if, how and why eHealth interventions were included in careplans. A concurrent TA was used in combination with a retrospective interview, performed immediately after TA. TA is utterly suitable

Table 1
Topics, definitions and questions (illustrative).

Topics and questions	Definition used in study
Clinical reasoning Diagnoses Did you describe nursing diagnoses for your client? On what signs and symptoms did you make your decision? Did you make use of a classification or other tools? Outcomes In what way did you decide on the outcomes? In what way did you involve the client/ informal network? Interventions In what way did you decide on the interventions? How did you decide these were fitting for the client?	Clinical reasoning in nursing can be defined as a complex cognitive process that uses formal and informal thinking strategies to gather and analyse patient information, evaluate the significance of this information and weigh alternative actions (Simmons, 2010)
eHealth Assessment of eHealth interventions Did you think of eHealth interventions when deciding on interventions that would fit the client? What eHealth interventions do you know of? In what way do you keep up with new developments in eHealth?	eHealth is the use of new information and communication technologies, internet technology in particular, to support or improve health and healthcare (Krijgsman et al., 2015)

for gaining insight on how tasks are done (Fonteyn et al., 1993). Concurrent TA consists of thinking aloud while performing a task and provides understanding into thought patterns and use of strategies of participants (Burbach et al., 2015). The task concerned constructing a careplan for a client. In the introduction and during the retrospective interview beliefs of participants about eHealth and methods used for assessment of patients needs were discussed. We aimed to explore the ideas of nurses on the concept of eHealth within the context of clinical reasoning. We therefore discussed eHealth and examples of eHealth interventions with participants.The interview was used to further clarify the obtained information (Ericsson and Simon, 1998). The knowledge gained is most reliable when the time between TA and the follow-up interview is short, therefore we combined them in one time slot (Gibson, 1997). The research team developed a consensus-based protocol with topic lists, focussing on clinical reasoning and the assessment of eHealth, in order to follow a consistent procedure (Lundgrén-Laine and Salanterä, 2010). It was preferred to use real client cases because these would represent practice best. Two fictitious cases were kept at hand in case nurses had trouble thinking of a suitable client case. These cases were checked upon face-validity by two expert homecare nurses. Two pilot TA's were done with homecare nurses in order to test the protocol.

2.4. Procedure and data collection

Nurses were recruited for TA sessions in three regional care-organisations and the Dutch Nurses Association. They were informed on the procedure and asked to have a client case available on the planned TA date. Two researchers performed the TA sessions. At the start of a TA session nurses were instructed to verbalize thoughts while developing a careplan. During TA notes were made for further questioning. In order to prevent social desirability bias it was stressed that no judgements were made about the nurse's behaviour. Nine nurses used recent client cases, one nurse made use of the fictitious case. Immediately after the TA sessions both researchers wrote memos in which they reflected on observations made, their role, and hypotheses that came to mind.

2.5. Focus on classification

Seven home care nurses participated in the part of the study with a focus on classification systems. They were recruited after an online call on the website of the Dutch Nurses Association (V&VN). These TA's were performed by student researchers who used the same protocol as in the main part of the study. The follow-up questioning, however, focused on the use of classifications during the construction of a careplan and the place of eHealth within these classifications. Six participants made use of real client cases, one used a fictitious case. Memos were written immediately after TA as well.

2.6. Ethical considerations

All participants (see Table 2.) were informed on the procedure and able to withdraw at any time. It was stated that all data would be used anonymously and for research purposes only. Ethical approval was obtained from the regional Medical Research Ethics Committee for participation of clients in the study, who also signed for informed consent. All interviews were recorded and transcribed.

Table 2
Participants.

Study	Participants	Men	Women	Age (average)	Practice (average)
Focusgroup	6		6		
Orientation	6		6		
TA study	12		12		
TA study classification	7	4	3		
Focusgroup membercheck	12	1	11		
Total	43	5	38	38	6

2.7. Analysis

An integrated analysis was done of the data collected in the orientation, think aloud sessions and the membercheck focus group. Analysis was done according to thematic analysis using an inductive approach (Fereday and Muir-Cochrane, 2006). Analysis consisted of four phases and was done by two researchers except for the last two phases which were done by the research team in order to enhance interrater reliability. Phase 1 consisted of inductive analysis of the orientation data. Relevant quotations were chosen and were given a semantic reference (code) by two researchers independently. The researchers then discussed codes until consensus was reached. Subsequently all data of the orientation was coded during which codes were merged and new codes were added. Thus, a workable set of 61 codes emerged, being the baseline set with which the analysis of the TA study could start. Phase 2 concerned further analysis by selective coding of the TA data. The baseline set of codes was then used for coding all TA data after every code had been given a description. Descriptions were discussed until consensus was reached. During analysis some codes were added if new information came along. This was particularly the case for the part of the study in which classification systems were the focus; therefore a small subset of codes was used for that part of the analysis only. In phase 3 affinity diagramming took place (Hanington and Martin, 2012). This method was used in order to meaningfully cluster the set of codes and quotations into categories that represent coherent information about the participants views and ideas. This set of codes was critically discussed until consensus was reached. Then all codes were clustered into eleven categories during a group activity in which codes were written on small paper cards. Afterwards the underlying concepts of the categories were

Table 3
Meaningful clustering of data in categories.

Categories	Description
Profession homecare nurse	All perceptions of nurses concerning their profession which include how they perceive their role, their interpretation of tasks, their opinions, motivation in general and related to professional care and eHealth
The client and eHealth	Point of view of clients on eHealth, their opinions and ideas according to client and nurse participants of the study
Assessment	All perceptions and descriptions of assessment of health problems, nursing diagnoses, interventions and outcomes including how these are administrated, and all thinking and reasoning processes used including how needs, wishes and preferences of clients are incorporated
Nurse-client relationship	All perceptions of clients and nurses on their professional bond
Self-management of clients	All perceptions on care-related decision making or selfcare of clients and their important others
Client characteristics	All features of the group of clients discussed in the study that indicate the complexity of care
Communication strategies	All ways of exchanging information concerning the client's health problems
Client documentation	All administrative ways of documenting client record information such as careplans, reports etc.
eHealth requirements	All needs nurses express for proper assessment and use of eHealth
eHealth technology and tools	All digital and electronical innovations in homecare described or mentioned by nurses in the study including their perceptions and opinions on their use today and in the near future
Organisational and societal context	All perceptions and opinions of participants being conditions for the proper use of eHealth

discussed which succeeded in final descriptions of the categories (see Table 3.). In phase 4 concept mapping of results was done. This step of the analysis consisted of the clustering of categories into meaningful themes that would provide the relevant answers to the research questions. Concept mapping was done by creating a visual framework from propositions based on quotations that emerged within the categories. The team did so in two groups of researchers after which both maps were compared. Interrelationships, similarities and differences of both maps were then discussed and five interrelated themes were distinguished (see Table 4.).

2.8. Focusgroup membercheck

The last part of the study consisted of a focusgroup in which twelve nurses participated. After presenting the preliminary results of the study, a group discussion of 45 min took place in which nurses were asked if they thought the themes plausible. This resulted in verification and some additional clarification of findings.

3. Results

The findings in this section are being described according to five themes that emerged from the analysis. These five themes concern: the holistic view of nurses and importance of putting the client first; dilemmas in care that nurses encounter, specifically when it concerns enhancement of self management; the way clinical reasoning and decision making is done; the perception of eHealth according to homecare nurses; and the opinions they have about eHealth in homecare.

3.1. The client is paramount

If one thing became clear, it is the holistic view nurses have. Clients, their health problems, their specific situation and important others are leading for what a nurse decides to do.

> "I can set the bar high, but the client takes the central role, the client has to wish for it too "

Nurses believe gaining trust during the start of a professional relationship is first and foremost. Often a nurse suggests simple interventions to begin with in order to build a relationship. Most of the time nurses have additional interventions in mind, but keep those to themselves because more time is needed to determine if a client is ready for them.

> "In the beginning my visits didn't make any sense to her … nowadays I see her and she likes to see me. I really like that. It makes me happy, it means she trusts me."

Also nurses feel they are guest in a client's home and therefore want to provide personalised care. Nurses feel professionally for most of their clients and their predicaments, their job satisfaction is mainly due to those relationships.

Table 4
Themes and categories after concept-mapping.

Themes		*Categories*
The client is Paramount	Nurses have a holistic view and act primarily on the client's needs wishes and preferences.	Profession of homecare nurse The client and eHealth Assessment Nurse-client relationship
Self-management in Complex Care	Nurses want to enhance self-management and decision making of clients, but they also feel responsible for their clients safety.	Self-management of clients
Clinical Reasoning and Decision making	The process of care assessment in daily practice	Profession of homecare nurse The client and eHealth Assessment Client characteristics Communication strategies Client documentation
eHealth as Means to an End	Nurses perceive eHealth as a rather abstract notion and do not always recognize tools they use as being eHealth	Profession of homecare nurse The client and eHealth Assessment eHealth requirements eHealth technology and tools
Opinions on eHealth	Nurses can have strong opinions about eHealth and its place in nursing care, but do give openings for successful implementation of eHealth interventions in nursing care.	eHealth requirements eHealth technology and tools Organisational and societal context

3.2. Self management in complex care

Client cases that nurses discussed concern clients with multiple, often chronic conditions and interrelated health problems.

> "This client is alone, his wife passed away. Well, in the past he drank a lot of alcohol … he didn't take care of himself. He also has lung problems. We need to give instructions how to inhale his medication … support him in activities of daily living … but he doesn't want our help. He tells us he did take a shower, but he still smells."

Despite this complexity, nurses want to enhance self management but they differ in what they think self management is. Some of them refer to a client's autonomy in making decisions, others refer to selfcare and the need to motivate clients to perform tasks in daily life themselves. Nurses use several strategies in order to enhance self management. Having gained trust, they often suggest small changes in performing selfcare-tasks, and keep having conversations about the benefits of doing things yourself. They use humour, persuasion and professional discussion techniques. If they succeed their job-satisfaction boosts. Nevertheless, they also feel responsible for their clients' wellbeing and safety. Nurses often assess specific diagnoses such as: (risk for) self neglect, ineffective health management, loneliness or social isolation, falling, selfcare deficits in nutrition, pressure ulcers and noncompliance with medication therapy. Nurses' concerns focus on letting a risky situation go on during some time in which they try to find a solution while on the other hand they have the urge to take over because they're afraid things will get out of control.

> "… for medication management he uses all kinds of different little jars … so there is this cabinet in which medication is kept … he thinks he has an overview but he completely has lost track of the situation."

Most nurses in the study, however, have the conviction not to debate a belief system of a client. They may have another opinion but they often choose to respect their clients' choices.

> "Is a messy living room really a problem? … maybe the client is really happy in that mess for years, yes, well, who am I to say it's a problem. "

Nurses do perceive such cases as dilemmas and express a wish to debate them. In coping professionally, the importance of having gained trust is again stressed. Based on trust the opportunity will emerge to persuade clients to think about other solutions, so do nurses say.

3.3. Clinical reasoning and decision making

Assessment of care is done more or less intuitively, based on a nurse's professional experience. Only during the task of constructing a careplan, nurses consciously use their clinical reasoning skills.

> "… I'll have the conversation, just the way it goes, I use my intuition. I'm not using a checklist or whatsoever. Afterwards I check whether I have everything I need. I'll go through the standardised items … and check whether I've addressed all the aspects."

Nursing diagnoses are being described generally. In some cases information is limited to some planned interventions. Nurses say they want to check first impressions by making observations during a longer period of time and discuss them with colleagues before assessing diagnoses. The frequency and time needed for a home visit is an estimate which is personalised to a client's needs. However, despite nurses' intention to tune their care to the client, nurses also are inclined to choose familiar interventions, often for reasons of control.

> "We decided to add an extra visit, in order to check whether everything is okay …"

All patient records systems are equipped with a nursing classification system. We found several systems that made use of the Omaha classification and a system in which a subset of diagnoses from the NANDA-classification was available. The systems that use the Omaha-classification all have a structure with pre-set answering categories, although additional open answering is possible. Nurses are not content with them, especially when it comes to describing complex client cases. They claim making use of these 'Omaha' electronic systems does not help them to make use of their own knowledge and professionalism, with which they refer especially to the pre-set character of these systems.

> "OMAHA determines for you … these are defining characteristics of a diagnosis … we are able to describe a diagnosis ourselves, that's our profession"

Participants in the study that were educated to describe diagnoses by the book tried to find room within pre-structured systems to still fit those in. They sometimes consulted Carpenito's handbook as an aid in their clinical reasoning.

3.4. eHealth as a means to an end

Nurses perceive eHealth to be a rather abstract notion. When asked, they mention specific apps for example on wound care, or interventions such as video calling with clients. Other applications such as electronical medication dispensers or emergency alert systems are such well-integrated tools nurses do not even think of them as being 'eHealth'.

> "Medido (electronical medication dispenser) is a really nice one for clients, but I don't know if this is eHealth as well?"

Electronic devices for domestic use such as GPS-trackers, and sensors are being mentioned. Nurses do also think of electronic records and communication tools on digital devices such as smartphones and tablets. Nurses acknowledge the need for training to make better use of eHealth. In order to keep themselves up to date almost all nurses consult the internet. Care organisations also provide nurses with new information and some of them keep up with professional literature by reading nursing journals.

> "… we need to be well informed about the product that you want to introduce with your client, because if I'm insecure I'll never get my client to trust it … I think it is very important to be well instructed before we use it in daily practice."

Nurses do say information is fragmented and therefore hard to keep track of. Almost all nurses emphasize the fact that knowing about eHealth is one thing, but actually using eHealth, and discussing it with clients definitely is a next step. They also stress the importance of user-friendliness of tools and having them available to show to clients. Next to that they believe eHealth to be helpful under specific conditions. Sustaining clients' privacy is one of those conditions, as well as technical and user support, and knowing the cost specifications. Nurses mention that costs can be an impeding barrier for clients and they do not want to be 'selling' eHealth just for the sake of it.

> " *it could be a solution but there's always the money, it is not for free …*"

> "a lot of people do not have the means to buy these fancy things such as a 'lifesave' (personal alarm system).."

3.5. Opinions on eHealth

Finally, this study shows that nurses have some strong opinions on eHealth. The first being the notion that eHealth isn't for the elderly. Clients mostly are older, frail people. Nurses believe most of them simply cannot cope with eHealth and choose not to suggest them. However, they do acknowledge the fact that some older clients have skills, either because they see clients work with tablets, skype with their children or because some clients could probably learn to work with user-friendly devices.

> "Well, eHealth only suits those who have interest in ICT. So, it can be the 95-old person who really likes a tablet."

Nurses also say that the current generation of older people is probably the last with such coping problems, next generations will be that more used to new technology that this seems to be a temporary problem. However, another opinion nurses have is that eHealth is at odds with person-centredness. Starting a relationship with a client doesn't start with suggesting eHealth, so they say. It would interfere with building a relationship of trust. They want to make observations, be physically present and have face to face contact. Especially when it comes to conversations in which emotional support takes place nurses want to have eye-contact with clients.

> "Most of the time I won't do it at home … What will a client think of me … ? She's only looking at her iPad."

Nevertheless, some nurses do acknowledge the benefits of the use of specific tools right at the start of their professional relationship.

> "When people are avoiding care, I make use of eHealth such as an electronical medication dispenser. Then I don't have to visit them very often and a client doesn't have the idea he receives care but in the meantime I can monitor a situation. This is the start of the professional relation and building trust in a situation that wouldn't work with the use of conservative care. "

But most nurses suggest specific innovations such as video calling creates too much of a distance. They won't be able to see a client's behaviour in their home environment, when moving around, whether clients are in pain or want to discuss their troubles. Nurses therefore often decide to want to see for themselves how clients are doing.

> "Well, I think it is very important to have personal contact with the client, because when I act at a distance we won't bond and I won't know the reaction of the client. And the preferences of a client. I can't see that from behind my desk. So, I think the face-to-face contact is really important."

Also, especially when clients have cognitive problems nurses are careful whether eHealth interventions offer a fitting solution. The notion that eHealth interventions should fit a client as a person prevails above all.

4. Discussion

This study was designed to determine how homecare nurses assess eHealth during assessment of care. The study shows that most eHealth interventions are known to nurses but that they are not primarily inclined to suggest them to clients. This is in line with other studies that indicate that few eHealth interventions are being used in healthcare despite their supposed benefits (Schurer and Velthuijsen, 2012). The assessment of care often concerns complex situations in which nurses face dilemmas. They either feel forced to take over selfcare activities in order to ensure clients' safety or feel obliged to respect clients' wishes and hope for the best. Such dilemmas take much creativity which doesn't always leave room for experimenting with eHealth solutions (de Casterle et al., 2008).

Also, nurses want to build a trusting relationship with clients and work in a person centred way, first and foremost. They believe some specific eHealth interventions, such as video caling or electronical medication dispensers, might hinder a person centred approach. Possibly, the underlying assumption is that clients are not empowered to self manage their own health-related activities. True as this may be, it is in contradiction with the notion that such eHealth interventions could actually be used to empower clients or support personal contact about care interventions (van der Eijk et al., 2013). Combined with the fact that nurses have a heavy workload it is to be expected that they choose familiar ways of working (McMahon, 2017).

Remarkably, nurses do seem to believe they need more knowledge on eHealth while at the same time they have strong opinions on the supposed effects of eHealth, specifically for the older, frail clients. Possibly the go-getting mindset of most nurses and the emphasis on knowledge and evidence based practice in general evokes the idea that knowledge will inspire them to assess eHealth (Walsh, 2008). Another assumption is that nurses lack shared decision making skills in daily practice during this day and age in which client participation in homecare becomes more or less self evident (Span et al., 2015). Finally, several nurses told researchers they were glad to be in the study because the TA sessions helped them to reflect on their work and specific complex cases. This notion underlines the need for reflection on complex cases (Brownie et al., 2016).

4.1. Strengths and limitations

One limitation of the study is the risk of selection bias. We recruited nurses in several nursing teams with varying working conditions all over the country in order to retrieve data that would offer a broad perspective. However, the nurses that voluntarily responded to the online call could be nurses with a positive attitude towards eHealth. On the other hand, we did found various ways of thinking about benefits and doubts nurses have about eHealth. One of the strengths of the study that would overcome such bias is the rigorous methodology. Triangulation of methods was used, since focusgroups as well as interviews and observations were performed. Next to that affinity diagramming as well as concept mapping was built into the thematic analysis.

5. Conclusion

Homecare nurses strongly believe in the importance of a trusting relationship. Since they are conscious of the fact that their presence interferes with clients' personal lives they are eager to provide person-centred care. Nurses assess care based on intuitive reasoning first followed by constructing a careplan. When they construct a careplan within a classification system, they are forced to justify their assessment. These systems either help or inhibit them in their clinical reasoning depending on the pre-set character of the system involved. In the end, the extent to which nurses believe a client trusts them determines which interventions, including eHealth, they suggest to clients. Whether innovations seem suitable for a client depends on beliefs nurses have. Older, frail clients are generally not seen fit to handle electronic tools or for replacing visits with video calling. Furthermore, nurses think personal contact to be a necessity for quality of care, therefore eHealth should not replace this. Most nurses believe they need knowledge, time and home visits in order to persuade clients to try eHealth. On the other hand, nurses give openings on successful implementation. When tools can be used in a person-centred way, nurses do believe eHealth to be an asset and a helpful aid in the care they want to provide.

Declaration of competing interest

None.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.nepr.2020.102925.

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