"The actual level of palliative reasoning of nurses, in daily nursing care, a quantitative study"

Universiteit Utrecht, Masteropleiding Klinische Gezondheidswetenschappen,

Masterprogramma Verplegingswetenschap, UMC Utrecht

Cursus Afstudeeronderzoek

Naam student: I.A. Morren

Studentnummer: 3690251

Naam begeleiders: Everlien de Graaf & Saskia Teunissen

Stage-instelling: Academisch hospice Demeter, De Bilt

Cursusdocent: Janneke de Man

Beoogd tijdschrift: Palliative Medicine

Referentiestijl volgens beoogd tijdschrift: Vancouver

Aantal woorden volgens beoogd tijdschrift: 3000

Datum: 04-07-2013

Aantal woorden artikel: 3488

Aantal woorden Engelse samenvatting: 290

Aantal woorden Nederlandse samenvatting: 297

Status: Definitief

English abstract

Title: The actual level of palliative reasoning of nurses, in daily nursing care, a quantitative

study.

Background: Nurses, although not feeling fully competent, have an important role in

palliative care. Research has shown that the existing guidelines for palliative care are not

sufficiently attuned to their expertise and training. Therefore, the method of palliative

reasoning was developed. The method pays attention to four dimensions of suffering:

physical, emotional, social and existential. A training, called Decision-making in the palliative

phase, was developed to instruct nurses in palliative reasoning.

Research question and aim: To what extent is the nurses opinion about their ability to apply

palliative reasoning in accordance with the actual level of palliative reasoning? To determine

the effect training has on the level of palliative reasoning and to point out ways in which the

training can be improved.

Method: An explorative observational cross-sectional design. The study took place in two

hospices in the Netherlands from January to April 2013. Data of the actual level of palliative

reasoning and the nurse opinion were prospectively (interdisciplinary consultation, nurses)

and retrospectively (client records) collected with the aid of two measurement instruments

and a questionnaire.

Results: 16 nurses participated. Six interdisciplinary consultations were examined and 35

client records were analyzed. The actual level of palliative reasoning and the opinions of

nurses correspond reasonably well. The focus of nurses was in particular on the physical,

emotional and spiritual dimension. The social dimension received less attention. Nurses

indicated that they experienced problems in the application of the method.

Conclusion: The questionnaire gives a good picture of the actual level of palliative

reasoning. The questionnaire cannot be used to determine the problems nurses experienced

in the application of the method in daily nursing care.

Recommendations: Further research is needed to examine the problems nurses

experiences in applying the method in daily nursing care.

Keywords: Palliative care, palliative reasoning, quality of care, nursing care.

2

Dutch Summary

Titel: Het werkelijk niveau van palliatief redeneren van verpleegkundigen in de dagelijks verpleegkundige zorg, een kwantitatief onderzoek.

Inleiding: Verpleegkundigen hebben een belangrijke rol binnen de palliatieve zorg. Desondanks voelen ze zich hierin niet volledig competent. De bestaande richtlijnen voor palliatieve zorg zijn onvoldoende afgestemd op hun expertise en opleiding. Daarom is de methode Palliatief Redeneren ontwikkeld. De methode besteedt aandacht aan vier dimensies van lijden: fysiek, emotioneel, sociaal en existentieel. De training 'Besluitvorming in de palliatieve fase' werd ontwikkeld om verpleegkundigen te trainen in het toepassen van palliatief redeneren.

Doel en onderzoeks(vragen): In welke mate komt de mening van verpleegkundigen over hun toepassing van palliatief redeneren overeen met het werkelijk niveau van palliatief redeneren? Om het effect van de training op het niveau van palliatief redeneren te bepalen en om te bepalen op welke punten de training verbeterd kan worden.

Methode: Exploratief, observationeel cros-sectioneel design. Het onderzoek vond plaats van januari - maart 2013 in twee hospices in Nederland. Gegevens over het werkelijk niveau van palliatief redeneren en de mening van verpleegkundigen werden prospectief (interdisciplinair overleg en verpleegkundigen) en retrospectief (cliëntendossiers) verzameld met behulp van twee meetinstrumenten en een vragenlijst.

Resultaten: 16 verpleegkundigen hebben deelgenomen. Zes interdisciplinaire overleggen werden onderzocht en 35 cliëntendossiers werden geanalyseerd. Het werkelijk niveau van palliatief redeneren en de mening van verpleegkundigen komt goed overeen. De focus van de verpleegkundigen lag met name op de fysieke, emotionele en existentiële dimensie. De sociale dimensie kreeg minder aandacht. Verpleegkundigen gaven aan dat zij problemen ervoeren bij de toepassing van de methode.

Conclusie: De vragenlijst geeft een goed beeld van het werkelijk niveau van palliatief redeneren. De vragenlijst kan niet gebruikt worden om de problemen die verpleegkundigen ondervonden in de toepassing van de methode in de dagelijks verpleegkundige zorg te bepalen.

Aanbevelingen: Vervolg onderzoek is nodig om de problemen die de verpleegkundigen ervoeren in de toepassing van de methode in kaart te brengen.

Trefwoorden: Palliatieve zorg, palliatief redeneren, kwaliteit van zorg, verpleegkundige zorg.

1. Introduction

Due to the ageing and growth of the population, the number of persons with a chronic disease will increase in the next twenty years. In 2011 135,741 people died from a chronic or acute disease in The Netherlands. The prognosis is that the total number of non-acute deaths will increase by 0.7% each year. As a consequence the need for palliative care will increase as chronic diseases all have a progression which, although specific for an individual, ends in the palliative phase. As

Palliative care aims to improve the quality of life of patients and their families facing the problems associated with a life-threatening illness. Early identification, assessment and treatment of physical, psychosocial and spiritual problems, will relieve and prevent suffering.⁵

Registered nurses (RNs) have a significant role in palliative care, as they are in daily contact with the patient.⁴ Nevertheless RNs do not feel fully competent with palliative care.⁶ They state that they lack knowledge about psychosocial support, pain and symptom management, which affects their confidence and self-efficacy in daily nursing care.⁷ Families experience a lack of optimal symptom control, inadequate emotional support and detect the limited knowledge and skills of the RNs.⁸

To fill this knowledge gap and increase the confidence of RNs in palliative care, the Association of Comprehensive Cancer Centres developed guidelines, based on the principles of palliative care to assist caregivers, including RNs, in applying palliative care.9 RNs point out that they find it difficult to work with guidelines, partly because they are not sufficiently attuned to their expertise and training. 10 Therefore, the method of palliative reasoning has been developed, which assists RNs in applying these guidelines. 11 Palliative reasoning allows RNs to analyze complex patient problems in the palliative phase in a systematic way. It supports them to make the best choices for treatment and care, by focusing on the needs of the patient. The method pays attention to four dimensions of suffering: physical, emotional, social and existential. The application of palliative reasoning makes palliative care transparent and the quality of the care testable. 12-14 The method consists of four phases; (1) mapping out the problem, (2) summarizing the problem and developing a policy; (3) agreeing on the evaluation of the policy and (4) executing and evaluating the policy, and where necessary, updating the policy. 12 The application of the method is supported by palliative guidelines, a decision disk, working hypotheses and summary cards. A training course has been developed to instruct RNs in palliative reasoning. The training aims to enable RNs to apply the method in daily nursing care. This becomes visible during the weekly interdisciplinary consultation (IDO) where at least one relevant problem has to be worked out according to the method of palliative reasoning. It is also

reflected in the reports that are part of the client records, which discuss actual and potential client problems

To evaluate the effect of the training in daily nursing care a questionnaire is used. It includes questions about RN opinions of: the application of the method, the attitude towards the method and the experienced problems. A positive attitude and a decrease of problems will increase the self-efficacy of RNs. This is important because enhanced self-efficacy will lead to high quality nursing care. However, it is difficult to sufficiently evaluate the effect of training with the aid of a questionnaire. In most cases, the measurement effect is limited to RNs satisfaction with the method of training and their increased expertise. Furthermore, people tend to color their perceptions with their own ideas and expectations and a questionnaire may compel people to give an answer which does not necessarily reflect their opinions. 16,17

2. Problem statement, Aim and Research Question(s)

The training for palliative reasoning is currently in development, so an evaluation of the effect of the training in daily nursing care is necessary. A quick analysis of the results of the current questionnaire shows that RNs think they are able to apply palliative reasoning, and that they do so in daily nursing care. It is unclear whether these positive results can also be found in daily nursing care. To what extent are RNs, in a high care hospice, actually applying palliative reasoning in daily nurse care?

The aim of this study is to determine the effect the training has on the level of palliative reasoning in daily nursing care of RNs in a high care hospice. It will also point out ways in which the training can be improved. When the training is improved so that RNs use palliative reasoning as intended, it becomes possible to examine whether the quality of life of the palliative patient is increased by using palliative reasoning.

Main research questions:

"To what extent is the opinion of RNs about their ability to apply palliative reasoning, in accordance with the actual level of palliative reasoning in daily nursing care, in a high care hospice, after being trained in palliative reasoning?"

Research questions:

- 1. What is the actual level of palliative reasoning employed in daily nursing care by RNs, who were trained in palliative reasoning?
- 2. What is the opinion of RNs regarding their ability to apply palliative reasoning after receiving training concerning palliative reasoning?
- 3. What is the attitude of RNs towards the method of palliative reasoning and the problems experienced in daily nursing care?

3. Method

3.1 Design and setting

Little is known about the subject of this study. We therefore chose a quantitative explorative observational cross-sectional design. Data of the actual level of palliative reasoning and the nurse opinion were collected prospectively, except for the data from the client records, which were retrospectively collected. Ethics approval was obtained from the Medical-Ethical Commission in Utrecht (The Netherlands). The study took place in hospice Kajan (Hilversum, The Netherlands) and hospice Demeter (de Bilt, The Netherlands).

3.2 Participants

Data were collected from RNs, client records and IDOs. The inclusion criteria of the RNs were; 1) worked in the daily nursing care in one of the two hospices in the months January, February and March 2013 and 2) participated in the training 'Decision-making in the palliative phase'. A convenience sample was used by involving all RNs who met the inclusion criteria. A total of 24 potential RNs were identified. Client records were included in the study if the RNs reported actual or potential problems in the records. Due to the exploratory nature of this study, a statistical power calculation concerning the minimum number of required client records was not necessary. Based on the average length of stay and the capacity of both hospices, a total of 39 client records were expected. Similar to the client records, IDOs were included if actual or potential client problems were discussed by the RNs during the IDO.

3.3 Data collection and procedure

The actual level of palliative reasoning was collected prospectively by analyzing the client records from the months January, February and March 2013 and prospectively by observing the IDOs in the months February and March 2013. The nurse opinion of palliative reasoning was collected retrospectively with the aid of a questionnaire in the months February and March 2013. The questionnaire was distributed during a nurse work meeting. Absent RNs received the questionnaire from the manager or nursing supervisor. A reminder was sent once to both hospices to increase the response.

3.4 Instruments

Data from the client records and IDOs were collected with the aid of two measurement instruments which were developed by the researcher and were based on literature.²⁰ Both instruments consist of closed-ended questions with yes, no or not applicable as response options. The questions were divided into four themes: use of guidelines, decision disk,

working hypotheses and summary cards. Thirteen questions were specifically about the weekly discussed and described care plans of the patients and the other questions were specifically about the one or more discussed and described problems within this care plan.

The questionnaire consisted of eight parts: general data, participant information, guidelines, palliative reasoning, decision disk, summary cards, working hypotheses and treatment policy. The questions, focusing on attitude, problems and use in daily practice, were based on literature and face validity was assessed by experts in the field of palliative care. The response options for attitude and use in daily practice were based on a Likert-scale, respectively yes, somewhat, no and always, sometimes, never. The response options for problems were: 1) yes, within myself, 2) yes, linked to my colleagues, 3) yes, linked to working environment, 4) no. To generalize the results of this study, the characteristics; gender, age, educational level and followed training of the RNs were collected.

3.5 Data analysis

Data were managed by means of the statistical program IBM SPSS Statistics version 20 using descriptive statistics. Dichotomous and categorical variables were described using frequencies and percentages. A filter for double cases was used to analyze the collected data about the care plans and the problems separately.

4. Results

The 24 potential RNs yielded a total of sixteen completed questionnaires, resulting in a participation rate of 66.7%, which is an excellent response rate. ¹⁸ The demographic characteristics of the RNs are shown in Table 1.

4.1 Actual level of palliative reasoning

The total number of expected client records was obtained (n=45), ten clients records were excluded. In total 346 actual problems were reported in 118 care plans. Potential problems were not reported. Six IDOs were examined, in which 62 problems were discussed in 21 care plans for a total of 12 clients. Potential problems were not discussed.

4.1.1 Client records

The priorities of the client were described in 57% of the care plans. The medication of the clients and the life expectancy were described in respectively 100% and 62% of the care plans. The functional status of the client was described in 97% of the care plans and in 52% a measurement instrument was used for this. The affective and cognitive mental states were described in respectively 83% and 86% of the care plans. In all care plans the social status was described. The family caregiver was described in 14% of the care plans and in 11% the capacity of the family caregiver to provide care was described. The spiritual status of the client was described in 108 of the 118 care plans.

A problem analysis, including the nature of the problems, was carried out for all problems. A causal factor was described for 83%, while for 30% one or more influencing factors was noted. For 1% of the problems the context was described.

For 96% of the problems a purpose was described. Pharmacological and non-pharmacological interventions were described in respectively 70% and 88% of the problems. The percentages of problems for which the different evaluation aspects were described varied from 9% to 79%. The complete results and percentages are shown in Table 2 & 3.

4.1.2 IDO

During the IDOs the palliative guidelines were used twice (3%) and the summary cards were never used. The priorities of the client were named in 86% of the discussed care plans. The client's and life expectancy were always named. The functional status of the client was always appointed unless there were no changes from the previous IDO. The affective and cognitive mental states were not named in respectively 10% and 24% of the discussed care plans. In 3 of the 21 analyzed care plans the social status was not named. The spiritual state

of the client was not named in 19% of the care plans. The identity of the family caregivers and their capacity to provide care was appointed in less than half of the discussed care plans.

A problem analysis was carried out for 84% of the problems. For over half (55%) of the problems a causal factor was named and also for 19% one or more influencing factors. In 50 of the 62 problems the perceived burden for the client was appointed. The effect of previous treatment (if applicable) was named in 66% of the problems.

For 7% of the problems a purpose was named. Pharmacological and non-pharmacological interventions were appointed in respectively 45% and 34% of the problems. The different evaluation aspects were appointed in 2% to 6% of the problems. The complete results and percentages are shown in Table 2 & 3.

4.2 Opinion of the RN

Four of the sixteen RNs indicated that they always, or as standard practice, used the method of palliative reasoning in daily nursing care. The other twelve do this for some cases or only in specific situations. For details see Table 4. Of the sixteen RNs, ten always, or as standard practice, describe the purpose of the treatment in the client record. The other six RNs do this for some cases or only in specific situations. All RNs, except for one, always, or as standard practice, describe the treating appointments per problem in the client record. Nine RNs always, or as standard practice, describe the evaluation of the treatment in the client record. The other seven do this for some cases or only in specific situations.

4.3 Attitude and problems

Overall RNs were positive about the use of the method in daily nursing care. When focusing on the four themes separately, palliative guidelines and working hypothesis scored the highest (both 88%) and summary cards the lowest (43%). When they used the method, RNs experienced problems within themselves in particular (range 38% to 75%). Six RNs indicated that they experienced no problems in the application of the method. When analyzing the four themes separately, results ranged from 13% to 50%. For details see Table 4.

5. Discussion

This study focused on the actual level of palliative reasoning in daily nursing care and the opinions of RNs about their level of palliative reasoning.

The results of this study demonstrate that the actual level of palliative reasoning and the opinions of RNs correspond reasonably well in many areas. The actual level of palliative reasoning is high. The physical, emotional and existential dimensions of the client were almost always discussed in the IDOs and described in the client records. The social dimension, in all its facets, was not consequently named and described, and the priorities of the client remained undescribed in little less than half of the care plans. This is surprising since the priorities of the client and attention to the social dimension constitute the pillars of palliative care in general, and of palliative reasoning in particular. The fact that hospices provide inpatient care can be an explanation for the inconsistent naming and description of the social dimension. Since care is given by professionals and therefore not dependent on the family care givers, care can always continue. In addition, because the care is provided by professionals, a certain psychical overload or pressure is removed from the family care givers. Nevertheless family reported that visiting a relative in a hospice causes a psychological burden. Attention to the social dimension should therefore not be set aside in a hospice with the idea that inpatient care rules out the social dimension.

The purpose of the pharmacological and non-pharmacological interventions and the corresponding evaluation aspects were discussed during the IDOs for less than 10% of the problems. In the client records the different evaluation aspects were described for little over 50% of the problems. It is difficult to give an explanation for this low rate. There seems to be a link between the IDOs and the client records. Subjects which received minimal appointment in the IDOs are described in more detail in the client records and items which are hardly mentioned in the IDOs were also described with less detail in the client record. Beside this, RNs had a positive attitude towards the method of palliative reasoning but also experienced problems in the application of the method, in particular in themselves. It is unknown which problems RNs experienced. It is thought that these problems are located in the areas of knowledge, skills and methodical working. 4,6-8,33 It was remarkable that the methodical structure, which is characteristic for the method of palliative reasoning, was not followed consequently during the IDOs because methodical working is particularly suitable for complex problems or situations.32 The problems which were experienced and the lack of adherence to the methodical structure of palliative reasoning have probably played a role in the low percentages. Both attitude and previous problems have a role in the degree of selfefficacy of RN.^{6,15} When the previous problems are known, the training can focus on this, which increases self-efficacy increase and also the quality of palliative care.¹⁵

The questionnaire used to evaluate the training cannot be used to determine what problems RNs experience. Expanding the questionnaire is not a satisfactory option, given that the other areas of the questionnaire gave a good view of the actual level of palliative reasoning, and the increased time to fill out the questionnaire would negatively affect the response rate and the quality of the responses.³³ Qualitative research, and specifically the use of focus group research, seems the most appropriate option. A focus group provides a lot of information from different viewpoints in a short time.¹⁷ With this information the training can be adjusted.

Several limitations of the current study must be noted. First, the study only looks at the presence or absence of the various components of the method of palliative reasoning. Compared to reality, this can result in either positively or negatively biased results. For example: the results of this study demonstrate that the guidelines are hardly being used. In reality this may not be so, because, although no guideline book is used during the IDOs, the purpose and interventions described in the client records can still be in accordance with the guideline. Further research into whether the purpose and interventions demonstrate compliance with the guidelines is necessary, given that the guidelines are based on scientific research, care at the end can be very complex and patients have a short life expectancy, so high quality care is essential. 4.11,12,19 An example of a possible positive bias is that this study indicates that the client records describe a purpose for 96% of the problems. Whether these purposes meet the requirements for the preparation of a purpose can however not be answered with this study.

Secondly, the sample size was relatively small, for both RNs and client records. Because this is a descriptive study it is not necessarily a problem. Partially because the expected number of client records is achieved and the characteristics of RNs that took part in this study are expected to correspond with the characteristics of RNs working in different hospices in the Netherlands. The mean age of RNs is this study was 51, which corresponds with the mean age of another study in a hospice.³⁴ In addition, RNs in this study were highly educated, which suits the requirements of RNs in palliative care because there is a need for a lot of knowledge, skill and experience.³⁵ To summarize, the results of this study are generalizable to other high care hospices in the Netherlands working according to the method of palliative reasoning.

6. Conclusion

This study was a first step towards mapping the actual level of palliative reasoning of RNs after the training 'Decision-making in the palliative phase' and point out ways in which the training can be improved. The results showed that the questionnaire gives a good picture of the actual level of palliative reasoning. The social dimension, the priorities of the client, the preparation of purposes, particularly during the IDOs, and the different evaluation aspects are components of the method where improvements are possible. RNs indicated that they experienced problems in the application of the method, especially within themselves. Also, it was a fact that the structure, which is a characteristic of the method, and in particular visible during the IDO, is not followed consequently. Both points seems plausible explanations for the lower scored components. The questionnaire cannot be used to determine the problems nurses experienced in the application of the method in daily nursing care.

7. Recommendations

This study was not carried out to investigate if changes in actual level of palliative reasoning causes an improvement in the quality of life experienced by patients, which is in principle the aim of palliative care. Such an investigation can only be conclusive when coupled with successful training. At the moment, this condition is not fully met as is apparent from the fact that RNs still experience some problems in the application of the method, particularly within themselves and the structure of the method is not followed consequently. In the development and refinement of the training explicit attention should be given to the importance of adherence to the structure of the method of palliative reasoning. Further research in the form of focus group interviews should be considered to characterize the problems experienced by RNs. When subsequently it is found that the training is successful it is possible to investigate whether the application of the method of palliative reasoning has an effect on the quality of life experienced by the patients.

References

- (1) Blokstra A, Verschuren W, Baan C, et al. *Vergrijzing en toekomstige ziektelast Prognose chronische ziektenprevalentie 2005-2025.* RIVM 2007
- (2) CBS Statline 2012, http://statline.cbs.nl/StatWeb/publication/?VW=T&DM=SLNL&PA=7052_95&D1=a&D2=a&D3=0&D4=31,38-1&HD=110413-1513&HDR=G2,G1,G3&STB=T (2012, accessed 20 October 2012).
- (3) Van de Velden LFK, Francke AL, Hingstman L, et al. Ontwikkelingen in de sterfte aan kanker en andere chronische aandoeningen. *Tijdschrift voor Gezondheidswetenschappen* 2008, 86(7): 399-404.
- (4) Adriaansen M, van Achterberg T, Borm G. The usefulness of the Staff-Patient Interaction Response Scale for palliative care nursing for measuring the empathetic capacity of nursing students. *J Prof Nurs* 2008 Sep-Oct, 24(5): 315-323.
- (5) WHO, www.who.int/cancer/palliative/en/. (2002, accessed 15 February 2013).
- (6) Francke A, Albers G, de Veer A, et al. Nog steeds veel behoefte aan extra scholing levenseindezorg. *Tijdschrift voor verpleegkundigen* 2012, 2: 37-40
- (7) Adriaansen MJ, van Achterberg T, Borm G. Effects of a post qualification course in palliative care. *J Adv Nurs* 2005 Jan, 49(1): 96-103.
- (8) Ersek M, Grant MM, Kraybill BM. Enhancing end-of-life care in nursing homes: Palliative Care Educational Resource Team (PERT) program. *J Palliat Med* 2005 Jun, 8(3): 556-566.
- (9) IKNL. Richtlijnen, http://www.iknl.nl/page.php?id=304 (2012, accessed 15 February 2013)
- (10) Schröder-Baars C, Verkaik R, Crijns M, et al. *Belemmerende en bevorderende factoren bij proefimplementatie van een richtlijn in de care*. Juni 2011, Projectnummer 89-89100-98-133.
- (11) Teunissen SCCM. *In palliative cancer care symptoms means everything. Symptom & symptom management in palliative care for cancer patients.* Utrecht, Netherland: University Utrecht, 2007.
- (12) Zylicz Z, Teunissen S, de Graeff A. *Algemene inleiding richtlijnen palliatieve zorg.* Integraal Kankercentrum Nederland: Landelijke richtlijn, 2010 versie 2.0.
- (13) Schreuder-Cats H, Hesselman G, Vrehen H, et al. Systematiek in de palliatieve zorg. Ontwikkeling van de beslisschijf 'Besluitvorming in de palliatieve fase'. *Nederlands Tijdschrift voor Palliatieve Zorg* 2008, ¾: 76-79
- (14) IKMN. Evaluatie pilot. Besluitvorming in de palliatieve fase, http://www.iknl.nl/uploaded/bibliotheek/document/IKMN_pilot_beslisschijf.pdf (2007, accessed 1 October 2012).
- (15) Lee TW, Ko YK. Effects of self-efficacy, affectivity and collective efficacy on nursing performance of hospital nurses. *J Adv Nurs* 2010 Apr, 66(4): 839-848.

- (16) Steehouwer M, Jansen C, Maat K, et al. *Leren Comuniceren. Handboek voor mondelinge en schriftelijke communicatie*. Groningen/Houten, Netherland: Wolters-Noordhoff, 2006.
- (17) Polit D, Beck. CH. *Nursing research. Generating and assessing evidence for nursing practice*. Lippincott: Wolters Kluwer Health, 2012.
- (18) Portney, L.G., & Watkins, M.P. Foundations of clinical research. Application of practice. New Jersey: Pearson Education, 2009.
- (19) Hochstenbach L, Reitsma N, Groot M, et al. Registratie palliatieve zorg in hospicevoorzieningen, REPAL jaarrapportage 2010, http://www.iknl.nl/uploaded/docs/Landelijk/palliatieve%20zorg/REPAL/REPAL%20jaarrapportage (2011, accessed 18 March 2013).
- (20) Wanrooij BS, de Graeff A, Koopmans RTCM, et al. *Palliatieve zorg in de dagelijkse praktijk.* Houten, Netherland: Bohn Stafleu van Loghum, 2010.
- (21) Kwekkeboom KL, Vahl C, Eland J. Impact of a volunteer companion program on nursing students' knowledge and concerns related to palliative care. *Journal of Palliative Medicine* 2006, 9(1): 90-99.
- (22) Morita T, Fujimoto K, Imura C, et al. Self-reported practice, confidence, and knowledge about palliative care of nurses in a japanese regional cancer center: Longitudinal study after 1-year activity of palliative care team. *The American Journal of Hospice & Palliative Care* 2006, 23(5): 385-391.
- (23) Morita T, Murata H, Hirai K, et al. Meaninglessness in terminally ill cancer patients: A validation study and nurse education intervention trial. *Journal of Pain and Symptom Management* 2007, 34(2): 160-170.
- (24) Adriaansen MJ, Van Achterberg T. A test instrument for palliative care. *International Journal of Nursing Studie* 2004, 41(1): 107-117.
- (25) Nakazawa Y, Miyashita M, Morita T, et al. The palliative care knowledge test: Reliability and validity of an instrument to measure palliative care knowledge among health professionals. *Palliative Medicin* 2009, 23(8): 754-766.
- (26) Nakazawa Y, Miyashita M, Morita T, et al The palliative care self-reported practices scale and the palliative care difficulties scale: Reliability and validity of two scales evaluating self-reported practices and difficulties experienced in palliative care by health professionals. *Journal of Palliative Medicine* 2010, 13(4): 427-437.
- (27) Phillips J, Salamonson Y, Davidson PM. An instrument to assess nurses' and care assistants' self-efficacy to provide a palliative approach to older people in residential aged care: A validation study. *International Journal of Nursing Studies* 2011, 48(9): 1096-1100.
- (28) Zwaanswijk M, Peeters JM, van Beek AP, et al. Informal caregivers of people with dementia: problems, needs and support in the initial stage and in subsequent stages of dementia: a questionnaire survey. *Open Nurs J* 2013; 7: 6-13.
- (29) Rijksoverheid. Mantelzorg, http://www.rijksoverheid.nl/onderwerpen/manterzorg/hulp-voor-de-mantelzorger (2012, accessed 14 May 2013).

- (30) Hudson P, Remedios C, Zordan R, et al. Guidelines for the psychosocial and bereavement support of family caregivers of palliative care patients. *Journal of Palliative Medicine* 2012 Jun; 15(6): 696-702.
- (31) Hudson P, Trauer T, Kelly B, et al. Reducing the psychological distress of family caregivers of home-based palliative care patients: short-term effects from a randomised controlled trial. *Psycho-oncology* 2013 Jan; 21.
- (32) Kuiper J, Zijsling P. Methodisch handelen inzichtelijk. Den Haag: Boom Lemma, 2010.
- (33) Yu CH, Bahniwal R, Laupacis A, et al. Systematic review and evaluation of web-accessible tools for management of diabetes and related cardiovascular risk factors by patients and healthcare providers. *Journal of the American Medical Informatics Association : JAMIA* 2012
- (34) Hess SA, Knox S, Hill CE, et al. Exploring the dreams of hospice workers. *Am J Hosp Palliat Care* 2013 Apr; 30.
- (35) Spreeuwenberg C, Bakker DJ, Dillmann RJM. *Handboek palliatieve zorg.* Maarssen: Elsevier Gezondheidszorg, 2002.

Table 1. Demographic characteristics of the RN (N=16)

Age in years Range (mean) (median)	30 to 70 (51) (55)
Gender N(%)	
Female	15 (94)
Educational level N(%)	
Intermediate vocational level	4 (25)
Bachelor level	11 (69)
University level	1 (6)
Courses taken outside the course 'Decision-making in the palliative phase' I	N(%)
Oncology training for nurses	2 (13)
Basic module palliative care	1 (6)
Postgraduate training palliative care	4 (26)

Table 2. Actual level of palliative reasoning during the IDO (N=21) and from the nurse reports in the

client records (N=118) for the care plans.

	Interdisciplinary consultation N (%)			Client records N (%)	
	Yes	No	Other	Yes	No
Decision disk					
Priorities client	18 (86)	3 (14)	_1	67 (57)	51 (43)
Current medication	21 (100)	-	-	118 (100)	-
Life expectancy	21 (100)	-	-	73 (62)	45 (38)
Functional status	17 (81)	-	4 (19) ²	114 (97)	4 (3)
Functional status (measurement instrument)	<u>-</u>	17 (81)	$4(19)^{2}$	61 (52)	57 (48)
Affective mental status	18 (86)	2 (10)	1 (5) ²	98 (83)	20 (17)
Cognitive mental status	11 (52)	5 (24)	$5(24)^{2}$	101 (86)	17 (14)
Social status	10 (48)	3 (14)	8 (38) ²	118 (100)	- 1
Family carer	2 (10)	11 (52)	8 (38) ²	17 (14)	101 (86)
Capacity family carer	1 (5)	12 (57)	$8(38)^2$	13 (11)	105 (89)
Professional support	<u>-</u>	13 (62)	8 (38) ²	- '	118 (100)
Spiritual / existential status	10 (48)	4 (19)	7 (33) ²	108 (92)	10 (9)
Investigation	1 (5)	′	20 (95) ³	27 (23)	91 (77) ³

NB.

Answer not present.

No changes during previous IDO.
Inapplicable because no treatments have been performed.

Table 3. Actual level of palliative reasoning during the IDO (N=62) and from the nurse reports in the

client records (N=346) for the problems.

	Interdisc	Interdisciplinary consultation N (%)			Client records N (%)		
	Yes	No	Inapplicable	Yes	No		
Palliative guideline							
Guideline use	2 (3)	60 (97)	/1	/	/		
Decision disk							
Problem analysis	52 (84)	10 (16)	_2	/	/		
Causal causes	34 (55)	28 (45)	-	/	/		
Influencing causes	12 (19)	50 (81)	-	/	/		
Review symptom suffering	50 (81)	12 (20)	-	/	/		
Previous treatment	41 (66)	8 (13)	13 (21) ³	/	/		
Summary card							
Summary card use	=	62 (100)	-	/	/		
Working hypotheses							
Working hypothesis	/	/	/	346 (100)	-		
Nature problem	/	/	/	346 (100)	-		
Context problem	/	/	/	4 (1)	342 (99)		
Causal factors	/	/	/	288 (83)	58 (17)		
Influencing factors	/	/	/	105 (30)	241 (70)		
Purpose	4 (7)	58 (94)	-	332 (96)	14 (4)		
Pharmacological interventions	28 (45)	34 (55)	-	241 (70)	105 (30)		
Non-pharmacological interventions	21 (34)	41 (66)	-	306 (88)	40 (12)		
Policy considerations	13 (21)	49 (79)	-	1	1		
Time evaluation	4 (7)	58 (94)	-	177 (51)	169 (49)		
Method evaluation	2 (3)	60 (97)	-	180 (52)	166 (48)		
Responsible evaluation	1 (2)	61 (98)	-	30 (9)	316 (91)		
Measurement instrument	1 (2)	61 (98)	-	274 (79)	72 (21)		

NB

¹ Inapplicable.

² Answer not present.

³ Previous treatment was inapplicable because this was a new problem.

Table 4. Use, attitude and problems experienced in daily nursing care by the RN to method of palliative reasoning and the four themes separately (N=16).

	Palliative reasoning N (%)	Palliative guidelines N (%)	Decision disk N (%)	Summary cards N (%)	Working hypotheses N (%)
Use in daily practice					
Always / standard	4 (25	4 (25)	1 (6)	1 (6)	9 (56)
Sometimes / only in specific situations	12 (75)	12 (75)	13 (81)	6 (38)	7 (44)
No	_1	-	1 (6)	4 (25	-
Not aware of existence	-	-	1 (6)	5 (31)	-
Way of use in daily practice					
Multidisciplinary consultation	/2	/	6 (38)	2 (13)	/
Daily patient discussion	/	/	2 (13)	1 (6)	/
Other moments	/	/	6 (38)	4 (25)	/
Inapplicable	/	/	1 (6)	4 (25)	/
Not aware of existence	/	/	1 (6)	5 (31)	/
Positive attitude					
Yes	15 (94)	14 (88)	10 (63)	7 (43)	14 (88)
Somewhat	1 (6)	2 (13)	5 (31)	4 (25)	2 (13)
Not aware of existence	-	-	1 (6)	5 (31)	-
Experienced problems					
Yes, in myself	8 (50)	8 (50)	8 (50)	6 (38)	12 (75)
Yes, linked to my colleagues	5 (31)	3 (19)	5 (31)	3 (19)	5 (31)
Yes, linked to working environment	3 (19)	1 (6)	3 (19)	2 (13)	1 (6)
No	6 (38)	8 (50)	4 (25)	5 (31)	2 (13)
Not aware of existence	-	-	1 (6)	5 (31)	-
Working hypothesis in client record					
Always / standard	1	1	1	1	10 (63)
Sometimes / only in specific situations	1	/	/	1	6 (38)

NB.

Total in each category does not equal total numbers of participants due to possibility to give multiple answers per question.

Answer not present.

Inapplicable