



CHAPTER 3
**Palliative sedation at home in the Netherlands:
a nationwide survey among nurses**

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ABSTRACT

Aim This paper is a report of a nationwide study conducted to assess experiences of nurses involved in palliative sedation at home after introduction of a physicians' guideline for palliative sedation.

Background Most studies investigating the practice of palliative sedation focus on physicians' practices and attitudes. However, little is known about experiences and attitudes of nurses.

Methods A web-based structured questionnaire was offered to 387 nurses providing medical technical care in 2007, assessing their experiences concerning, decision-making, treatment policy and communication, focussing on the last patient receiving palliative sedation.

Results The questionnaire was filled out by 201 nurses (response rate 52%). The majority of respondents agreed with the indication for palliative sedation. However, 21% reported to have refused carrying out a palliative sedation in the preceding year. The general practitioner was not present at the start of palliative sedation in a third of the cases, but was available when needed. The sedation was considered insufficiently effective by 42% of the respondents. According to a third of the respondents the level of sedation was not related to the required level of symptom relief, nor were changes in dosage based on the severity of symptoms.

Conclusion Although the guideline for palliative sedation appears to be followed adequately in the majority of cases with respect to indication for palliative sedation and reportage. The survey findings revealed shortcomings in medication policy, communication, medical control over the start and continued monitoring of palliative sedation.

3.1 Introduction

Palliative sedation plays an important role in palliative care as an intervention for relief of refractory symptoms, such as pain, delirium and dyspnoea occurring at the end of life.^{1,2} Palliative sedation ranges from superficial to deep sedation, and can be used intermittently and continuously (**box 1**).

Box 1. Definition of palliative sedation based on Royal Dutch Medical Association.³

Palliative sedation: The intentional lowering of consciousness of a patient in the last phase of life.

Intermittent sedation: Short and temporal administration of palliative sedation. This type of sedation is mainly used to provide rest in a distressed patient (e.g. dyspnoea or anxiety). In addition it can also be used to assess the situation of the patient (e.g. if symptoms are permanently refractory).

Continuos deep sedation: Most far-reaching form of palliative sedation. To apply this type of sedation at the end of life, the patients' condition should be irreversible and advanced, with death expected within 1-2 weeks at most. Recommendations include benzodiazepines as the drug of first choice, hydration and artificial nutrition offered to sedated patients only when the benefit outweighs the harm.

In comparable nationwide studies the prevalence of palliative sedation in end of life care in Europe varied from 2.5%-16%.⁴⁻⁶ Although the reported prevalence of palliative sedation varies between countries depending on definition, methodology used and research setting,⁷ it is clear that palliative sedation forms a considerable part of all end of life decisions.

In recent years, the practice of palliative sedation has been the subject of international medical, ethical and social debate⁸⁻¹⁰ aimed at establishing borders for its practice. Following political discussions about the medical practice of palliative sedation, the Royal Dutch Medical Society (RDMA) established a physician's guideline in 2005 for palliative sedation,³ followed by a revision in 2009. Strict recommendations were formulated limiting the application of palliative sedation to terminally ill patients with a life expectancy of 1-2 weeks. In addition, palliative sedation should not be applied using morphine and should be performed without the intention to hasten death. Although primarily developed for physicians, executive aspects of the guideline have consequences for tasks performed by other health care workers involved with palliative sedation such as nurses. The WHO definition of palliative care states that palliative care should use a team approach to address the needs of patients and their families.¹¹ Furthermore, a team approach is most important in situations where intensively debated treatment such as palliative sedation is considered and practiced. It is therefore surprising that the nurses' perspective receives so little attention compared to the physicians' perspective, in particular for nurses that are most involved in performing the technical procedures in palliative sedation.¹²⁻¹⁴

3.2 Background

In the Netherlands, palliative sedation at home is performed either by the general practitioner (GP) or by nurses specialized in technical procedures (medical technical assistance (MTA) teams) based on either a GP's or specialist's directive. These nurses are responsible for the use of technical appliances and their accompanying logistics, and coordination of care between involved health care workers. When assessing the needs of their patients these MTA nurses work with a derivative of the list as proposed by the North American Nursing Diagnosis Association (NANDA).¹⁵ This model is based on clinical judgment

about individual, family, or community experiences and responses to actual or potential health problems and life processes, and is used to determine the appropriate plan of care for the patient. A derived nursing diagnosis subsequently drives interventions and patient outcomes, enabling the nurse to develop the patient care plan.¹⁶ One of the key aspects of the model is consistent reporting to colleagues from other disciplines.

In most international studies the practice of palliative sedation is focused on physicians' practices⁴⁻⁶ and attitudes of the physicians.¹⁷⁻¹⁹ However, little is known about experiences and attitudes of nurses. Morita et al.²⁰ evaluated Japanese nurses' views on the adequacy of decisions regarding the use of artificial hydration and distress arising from artificial hydration related issues in palliative sedation. The study findings revealed inadequate communication between physicians and nurses regarding artificial hydration. Moreover, they observed that a substantial percentage of the nurses (15%) experienced serious emotional burden related to the use of palliative sedation for terminally ill cancer patients. The authors found a significant association between experience of emotional burden and experienced insufficient time, conflicting wishes of patient and their relatives, nurses' beliefs/skills about sedation and nurses personal values.

In a study performed in the United States, Rietjens et al.²¹ explored nurses' attitudes and experiences with palliative sedation. Based on results of semi-structured interviews, it was reported that non-physical symptoms played an additional role to start palliative sedation. The authors noticed that nurses struggled to use palliative sedation for patients who were suffering from these non-physical symptoms as they felt this type of suffering to be beyond their expertise. Reasons for this struggle were the subjective nature of these symptoms, which were difficult to measure and difficult to treat.

These studies show that although internationally the practice of palliative sedation appears to be performed adequately, there is still room for improving the practice of palliative sedation from a nursing point of view.

3.3 The study

3.3.1 Aim

The aim of the study was to assess experiences of nurses involved in palliative sedation at home after introduction of a physicians' guideline for palliative sedation.

3.3.2 Design

A cross-sectional descriptive study was performed in 2007 using a web-based structured questionnaire.

3.3.3 Participants

MTA-nurses were selected for this study because of their specific and intensive involvement with the (technical) application of palliative sedation. Potential respondents were approached using an address information inventory covering all of the 65 MTA teams in the Netherlands. The completeness of the information was verified with the different

regional comprehensive cancer centres. Address information for 16 teams proved to be incorrect or could not be retrieved. Therefore, 49 teams (75,3%) consisting of a total of 387 MTA nurses could be approached.

3.3.4 Data collection/Questionnaire construction

In order to evaluate the experiences of MTA-nurses with the current practice of palliative sedation a web based structured questionnaire using SurveyMonkey²² was constructed in 2007.

A panel of experts in the area of palliative sedation reviewed the first drafts of the questionnaire. Six revision rounds were performed to ensure applicability and completeness of the questionnaire. Subsequently, the questionnaire was screened by unit-leaders of the MTA-nurses. The final version was tested by two MTA nurses, and did not lead to substantial changes.

This final version of the questionnaire contained 80 items evaluating knowledge about the guideline, decision-making, medication and treatment policy concerning palliative sedation and communication between health care workers, patients and their relatives, whereby focussing primarily on their last patient receiving continuous deep palliative sedation in 2006 or later. Questions were asked in a neutral form. The majority of questions had dichotomous response options (yes or no, supplemented with 'I don't know'). For each question, a possibility for additional comments was provided. These explanatory notes were used for support and control of the given answers.

The questionnaire was made available for the period of a month. In this period two reminders were sent to ensure a high response.

As the questionnaire was self constructed and had not been subjected to psychometric assessment, the construct validity of the questionnaire was tested post hoc by adding five questions addressing the respondent's general opinion towards the above mentioned domains of the questionnaire (completed by 157 respondents). A five point scale ("poor" – "excellent") for each of the validating questions was provided, which was subsequently rescaled to categorise the respondents as being positive, negative or neutral towards a specific domain. Answers concerning the general practice (53 items), communication with patient (9 items), communication between nurses and general practitioners (total 11 items), medication policy (14 items) and reporting (5 items) were subsequently compared to the respondents general opinion obtained from the corresponding validating questions.

In general, responders providing a positive response for their general opinion with regard to a specific domain, reported positive on questions related to this domain. This was the case for 41 out of 53 items (77%) for general practice, for all 9 relevant items (100%) for communication with the patient, for 8 out of 11 items (73%) for communication between nurses and GP's, for 8 out of 14 items (57%) for the medication policy and for 4 out of 5 items (80%) for the report.

3.3.5 Ethical considerations

According to Dutch regulations, the study did not require review by an ethics committee or written informed consent from the patients' families, because the data collection was anonymous with respect to the deceased patient or with respect to the identity of the participants who were approached for the survey. All participants were able to volunteer for the study.

3.3.6 Data analysis

Using SurveyMonkey, the questionnaire was imported in an Excel file and analysed with SPSS 15.0 (SPSS Inc, Chicago, Illinois) for Windows. Descriptive statistics for central tendencies and spread were calculated.

3.4 Results

3.4.1 Respondents

Characteristics of the respondents are presented in table 1. A total of 201 MTA-nurses filled out the questionnaire (response rate 52%). Missing data varied per question and ranged from 0.6% to 14.1%. Almost half of the respondents (n=161 or 42%) filled out the questionnaire completely. Analyses were based on respondents with less than 10% missing data (n=170).

The respondents were predominantly female. In general, the group of respondents had substantial experience as nurse and working experience in a palliative care setting. In 2006, all but three respondents were involved in the implementation of palliative sedation. Most nurses reported to have experience with continuous deep sedation in 2006, whereas a minority reported to have carried out intermittent sedation in that year. Results presented below concern respondents presenting a case of continuous deep sedation (n=170).

Table 1. Characteristics respondent

	(N= 170)
Gender (No. (%) male)	19 (12.3)
Age (years)*	43.8 (8.3)
Experience as nurse (years)*	20.9 (8.9)
Experience in palliative care (years)**	6 (4–10)
Experience in medical technical assistance team (years)**	5 (2.5–7)
Number of palliative sedations performed in 2006**	15 (6.5–25)
- Of which continuous	10 (5–24)
- Of which intermittent	1 (0–3)

* Mean (SD); ** Median (IQR)

3.4.2 Knowledge about the guideline

Most respondents were aware of the existence of the guideline, half of them reported to have good or excellent knowledge about the content of the guideline (**table 2**). A few respondents reported aspects missing in the guideline, such as the role of the nurse (n=4) and adequate description of the term 'refractory' (n=4).

Half of the respondents followed some form of education concerning the guideline. This usually consisted of external supplementary training within the network (n=20), an internal informative meeting (n=19) or visiting a congress or symposium (n=16).

3.4.3 Practice

Palliative sedation was started in a third of the cases without the presence of the GP. The majority of respondents (71%) reported that the GP did not stay present until the desired level of sedation had been reached (**table 3**). However, in most of these cases (94.5%) the respondents reported that the GP was available if this was necessary.

In just over half of the cases the team or organisation had a practical protocol or checklist for palliative sedation, which in 48.1% of the cases was reported to be based on the RDMA guideline. Respondent reporting to use a checklist, indicated to have deviated from this practical protocol or checklist for their last patient in one out ten cases. In half of the cases, the respondents reported to have worked with fixed dosage schemes for palliative sedation. A minority (8%) reported to have deviated from this scheme.

3.4.4 Decision-making

The majority of the respondents indicated that their last patient suffered unbearably. Symptoms were considered to be refractory prior to the decision to start palliative sedation, and most respondents reported that all significant treatment options to relieve suffering had been tried out. Death of the patient was expected in most cases in 2 weeks or less (**table 3**). Nurses agreed with the indication by the physician for performing palliative sedation in 92.7% of the cases. Even so, 20.6% of the respondents reported to have refused to carry out palliative sedation in preceding year. Unclear or wrong indications for palliative sedation by the GP was mentioned in a number (n=7) of cases as a reason for refusal (not mentioned in table). Furthermore, sedation could have been postponed in 12.7% of the cases according to the respondents. Moreover, 18.5% of the respondents believed that palliative sedation was not started at the correct moment (too soon or too late).

Table 2. Practice and medication policy

	Yes No. (%)	No No. (%)	Don't know No. (%)
Knowledge of the guideline			
Aware of the guideline	175 (90.7)	18 (9.3)	^a
Good or excellent knowledge of guideline	79 (47.3)		
Aspects missing in guideline	22 (13.8)	87 (54.7)	50 (31.4)
Followed extra education on guideline	76 (47.8)	83 (52.2)	^a
Practice			
Was the GP at start of palliative sedation	103 (62.4)	53 (32.1)	9 (5.5)
Did the GP stay present until desired level of sedation had been reached?	34 (20.7)	117 (71.3)	13 (7.9)
Worked with a protocol or checklist for treatment	91 (57.6)	50 (31.6)	17 (10.8)
Deviated from protocol	14 (9)	108 (69.7)	33 (21.3)
Fixed dosage diagram	78 (50)	78 (50)	^a
Deviated from dosage diagram	12 (7.8)	81 (52)	60 (39.2)*
Medication & treatment policy			
Adequately trained to assist in process of palliative sedation	133 (85.8)	22 (14.2)	^a
Adequate knowledge of medication	127 (83.6)	25 (16.4)	^a
Took independent decisions regarding medication policy	23 (14.9)	131 (85.1)	8 (5.2)
Medication wrongfully discontinued	3 (1.9)	142 (91)	11 (7.1)
Medication wrongfully continued	5 (3.2)	145 (72.1)	6 (3.8)
Adverse events due to medication	20 (13)	126 (81.8)	8 (5.2)
Medication always available	125 (79.6)	27 (17.2)	5 (3.2)
Level of sedation monitored:			
- Only by the nurse	21 (20)		
- Only by the GP	12 (11.4)		
- By both	66 (62.9)		

* Instead of don't know respondents answered that they had no fixed diagram; ^aNot asked

3.4.5 Medication and treatment policy

Respondents mostly reported the use of midazolam (73.6%) as medication for palliative sedation. About half of the respondents (49.8%) also reported to have used morphine for palliative sedation. A small number of the respondents indicated that medication had been wrongfully stopped in the last patient, as they were of the opinion that medication should have been continued. On the other hand, for a small number of the cases it was reported that specific medication was continued wrongfully while it should have been stopped (**table 3**). In 13% of the cases problems with the use of the medication were reported, such as the occurrence of agitation/delirium (n=7), and problems (e.g. toxicosis) with the use of morphine (n=6).

Medication for palliative sedation was not always available (for example at night or in weekends) in 17.2% of the cases. Adjustment (either upward or downward) of medication was done in 94 cases (61%) based on the severity of the symptoms.

Most respondents reported to have been sufficiently trained (85.8%) to assist a GP in the performance of palliative sedation. In addition, their knowledge of the medication used in palliative sedation was reported to be good by most respondents (83.6%). However, in cases where respondents reported to be insufficiently trained, additional education about medication (n=17) communication and guidance (n=7), procedures of palliative sedation (n=6) and teamwork (n=4) were considered to be required. In 14.9% of the cases the nurse took independent decisions concerning dosage policy for the last patient.

The depth of the sedation was (systematically) assessed according to the respondents in 55.2% of these cases. For the majority of cases, the depth of the sedation was assessed both by the GP's and the nurse's. Systematic assessment of the depth of sedation was performed by means of observation of the patient (n=41), assessment of the patient's response to physical (pain) stimuli (n=33) and verbal stimuli (n=22).

3.4.6 Communication

Concerning their most recent case, respondents (86.5%) reported that the described patient or his or her representatives had received sufficient information about the aim of palliative sedation or the procedure during palliative sedation (**table 4**). A vast majority of respondents (95.3%) believed that the last patient had received sufficient guidance by themselves, colleagues or the GP (81.8%). The majority of the respondents found themselves sufficiently informed concerning the policy for sedation. An evaluation with the GP after termination of palliative sedation took place in 19% of the cases. Conflicts or disputes with the GP concerning the use of palliative sedation were reported by 10 respondents (6.2%). In the opinion of the respondents, a substantial percentage (10%) of the reported conflicts with patients or their relatives could be brought back to inadequate exchange of information (e.g. relevant information was not exchanged, such as possible side effects of the medication). Additional consultation with a palliative consultant took place in a minority of the cases (38.1%). However, 30.4% of these respondents found that consultation would have been useful in the case of the last palliative sedation.

Table 3. Decision-making, communication and report

	Yes No. (%)	No No. (%)	Don't know No. (%)
Decision-making prior to sedation			
Unbearable suffering present	149 (88.7)	7 (4.2)	12 (7.1)
Refractory symptoms present	150 (89.8)	12 (7.2)	5 (3)
All treatment possibilities depleted	137 (82)	17 (10.2)	13 (7.8)
Death expected in 1-2 weeks	158 (95.8)	3 (1.8)	4 (2.4)
Agreed with indication for palliative sedation by the GP	153 (92.7)	7 (4.2)	4 (2.4)
Communication			
Sufficient information to relevant healthcare providers	116 (78.4)	5 (3.4)	27 (18.2)
Palliative consultant informed	56 (38.1)	66 (44.9)	25 (17)
- Goal of palliative sedation	128 (86.5)		
- Procedure of palliative sedation	132 (89.2)		
Evaluation with GP after the finishing of the sedation	31 (19)	117 (71.8)	15 (9.2)
Report			
Uniform report maintained	97 (60.2)	64 (39.8)	^a
Consequent registration of dosage policy	159 (98.8)	2 (1.2)	^a
Insufficient report	11 (6.8)	150 (93.2)	^a

^aNot asked

3.4.7 Report

In nearly all cases (99.4%) a written report (e.g. a nurse's medical file) was used. Registration of events did not take place in a uniform manner in 4 out of 10 cases. Despite this observation, respondents felt that all events relevant for the administration of palliative sedation (such as change in dosage) were consequently and sufficiently registered for the last patient (**table 3**). Only a few respondents (n=11) believed that registration for the last patient was insufficient.

3.5 Discussion

In this study we evaluated the practice of palliative sedation at home in 2007 from the perspective of nurses providing medical technical assistance, after the introduction of the palliative sedation guideline of the Dutch Royal Medical Society. Most Dutch MTA-nurses were of the opinion that palliative sedation is performed adequately in the majority of cases with respect to the indication for palliative sedation and reportage. However, this survey identified shortcomings in medication policy, communication, medical control over the start and continued monitoring of palliative sedation.

3.5.1 Study limitations

There are several limitations to this study which have to be taken into consideration. First of all, these findings are based on the perspective of one discipline. A more comprehensive picture of the practice of palliative sedation could be obtained comparing views of other health care professionals involved in palliative sedation.

We noticed a significant number of missing values (up to 14,1%). This might be explained by the length of the questionnaire, but can also be related to interpretation of individual questions. Furthermore, a number of respondents filled out only a small portion of the questionnaire (less than 10% of the questions). This might be due to double entry in the web based questionnaire after a receipt of a reminder. Due to the fact that the respondents were anonymized, these double entries could not be identified. Finally we noticed response was not distributed equally over the regions in the Netherlands, suggesting some caution in generalizing these results nationwide. Nonetheless, we are of the opinion that a representative insight of the current practice of palliative sedation for the experience of MTA-nurses at home has been presented in this survey, although we are aware that self-assessments of this sort can be biased.

3.5.2 Discussion of results

Most respondents reported to be aware of the existence of the national guideline for palliative sedation. Key aspects with respect to decision-making (e.g. presence of refractory symptoms, unbearable suffering, and expected death within 1-2 weeks) appeared to be followed in the majority of cases. This is in accordance with the fact that only a few respondents reported that the start of palliative sedation could have been postponed. However, just about half of the respondents reported to have adequate knowledge about the guideline, and a similar percentage reported to have followed any additional education concerning the application of the guideline. As these guidelines have been developed for doctors, this finding may not come as a surprise. Although the actual knowledge of the respondents was not assessed in this study, additional education was reported by several of the respondents to be required for palliative sedation in general, medication policy and communication. Given the background of our respondents and their close involvement in palliative sedation, uniform education with respect to the content of these guidelines appears recommendable.

Whereas a medical domain deals with disease or medical condition, a nursing domain deals with human response to actual or potential health problems and life processes. Our study shows that tasks performed by the MTA-nurses border between these two domains. Related to this issue is the finding that the GP was absent at the start of the sedation in a substantial number of cases, and the fact that the GP did not remain present until the required depth of sedation was reached in the majority of cases. Possibly related to this issue, a substantial number of nurses in the present study reported to take independent decisions concerning the dosage of medication. Although in nearly all cases the GP was reported to be available when necessary, this does raise questions with respect to the nurses' responsibilities and juridical protection within the scope of palliative sedation.

Moreover, the fact that twenty percent of respondents reported that no arrangements were made with regard to the manner in which nurses and GP's would keep one another informed about the sedation policy, and twelve percent reported to be insufficiently informed by the GP, shows that improvements could be made in this area. In line with the NANDA approach, nurses should address the physicians on their shared responsibility with regard to coordination of and consistent reporting about the sedation process, as part of their nursing responsibilities.

This would make it necessary for the nurses to be adequately informed with regard to aspects concerning decision-making about palliative sedation in order to serve as an extra control for fulfilment of key criteria for administration of palliative sedation. In our study, however, 2-8% of the nurses reported not to know whether or not these criteria were met. These prevalences are in line with previous findings regarding involvement of nurses in the decision-making elsewhere.²³⁻²⁶ This involvement appears to be most required most for determination of (refractory) symptoms and the assessment that all relevant treatment options have been tried in a specific case. As reported by Rietjens et al. the subjective nature of some symptoms, adds to uncertainty experienced by nurses in the process of palliative sedation. Use of adequate measurement instruments for monitoring symptoms, combined with peer assessment of (non-physical) symptoms for which reliable instruments are not available, could assist involved health care workers and provide a basis for knowledge transfer.

In addition, one fifth of the nurses reported to have refused to carry out a palliative sedation in the preceding year. Unclear or wrong indication for palliative sedation by the GP was mentioned in a number (n=7) of cases as a reason for refusal, hence these issues could well be linked to communication between caregivers, between nurses and GP's as well as between nurses themselves. The fact that several respondents reported to be unaware of the kind of information that had been provided to the patient or their relatives may support this suggestions. A proper transfer of information, if necessary supported by a checklist, may help prevent this problem. In addition, it is recommended that the caregivers make clear agreements about the way in which they will keep one another informed.

Although the exchange of information concerning the possibility to perform palliative sedation and the reasons to start palliative sedation have been discussed with the patients or their relatives, the respondents reported to have refrained from informing the patients about relevant information, such as possible side effects of the medication. Just 19% of the respondents reported to have had an evaluation with the GP after palliative sedation. This might suggest that there is a necessity for a better communication between the caregivers themselves as well as between caregivers and patients. All this can be achieved by raising awareness that palliative sedation is a multidisciplinary form of care whereby both nurses and physicians play a critical role in shaping the experience of the patient and relatives at the end of life,²⁷ and that adequate cooperation and communication between all involved actors are essential parts of that process.

An important issue is the report of the inadequate effectiveness of palliative sedation reported by 46,6% of the respondents. A comparable proportion of respondents reported that medication dosages for palliative sedation were not tailored to the level of required symptom management. Although many factors play a role in guidance of sedations depth in palliative sedation (i.e. side effects, patient wishes),^{8,28} this could also be related to incorrect dosing of medication. In line with this observation, 16% of the respondents reported to have insufficient knowledge of medication to guide palliative sedation in a proper manner. Taken together, these issues could add to the burden felt by nurses with regard to the use of palliative sedation as reported earlier in a study conducted by Morita et al.²⁰

However, one has to bear in mind that systematic monitoring of the depth of sedation was used in just over half of the cases. Moreover, in cases where monitoring was performed, different methods were used. Nevertheless, the fact that palliative sedation is considered ineffective is a reason for concern, questioning whether palliative sedation practiced at home is in all cases adequate. Additional education with respect to use of medication and procedural aspects of palliative sedation (as suggested by the respondents) and implementation of standardized instruments to monitor depth of sedation and assess severity of refractory symptoms, could lead to more stable unambiguous application of palliative sedation.

Although a large number of respondents reported to have used morphine for palliative sedation, we assume that this can be explained by the fact that 67% of the respondents reported continued use of morphine for pain suppression, which is recommended in the current guideline. Furthermore, in nearly all cases a sedative (such as midazolam) was reported to be used alongside the administration of the opiates. Nevertheless, individual respondents reported stand alone administration of morphine for palliative sedation (3,5%), which is contrary to the recommendations in the current guideline.

3.6 Conclusion

In conclusion, as reported by Dutch nurses providing medical technical assistance, the Dutch guideline for palliative sedation appears in the majority of cases to be followed adequately with respect to the indication for palliative sedation and reportage. However, this survey identified shortcomings in medication policy, communication, medical control over the start and continued monitoring of palliative sedation. As MTA nurses have the possibility to take independent decisions, a thorough assessment of nurses' responsibilities within the scope of palliative sedation is warranted. In addition, a multidisciplinary approach for palliative sedation is preferable, whereby the need for adequate cooperation and communication should be emphasized. Future research should focus on medical policy and monitoring of palliative sedation, including opinions of both nurses and physician's combined in different settings of palliative care.

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