Original Article

Perception of bedside teaching within the palliative care setting—views from patients, students and staff members

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Background: Bedside teaching is an essential part of medical education. However, within the setting of palliative care at a university hospital, different needs and interests may collide. On the one hand students need to be prepared for the care for critically ill patients yet on the other, patients require particular tranquility and protection. An analysis of potential harm and benefits resulting from bedside teaching in palliative care is a crucial prerequisite for the organization of bedside teaching in this sensitive setting.

Methods: We performed a qualitative study researching the perception and challenges of bedside teaching on the palliative care ward at the Rostock University Medical Center. To that extent, elective courses "Intensive Practical Training in Palliative Care" were held during the summer and winter terms of 2016 and 2016/2017, respectively. Students and team members answered a self-developed questionnaire on the perception of bedside teaching on the palliative care ward. Patients were lead through semi structured interviews later analyzed according to the thematic framework approach.

Results: A group of 21 students in their clinical years, 20 patients and 19 members of the palliative care team participated in this study. The experience of working with patients in the palliative care setting was very valuable for almost all students. Most patients enjoyed the presence of students on the ward. However, some missed clear cutoff criteria for termination. Students mostly felt comfortable with palliative care patients and did not request professional help for coping with experienced aspects of dying and death. In contrast, members of the palliative care team though were concerned about patients' safety and comfort and requested strict guidance of students during the course.

Conclusions: Bedside teaching within the palliative care setting classified a valuable tool for specialized palliative care skills. However, in order to protect the critically ill, students need structured guidance and strict behavioral instructions for presence at the bed side.

Keywords: Bedside teaching; palliative care; perception; patient; student; team

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Introduction

There is an increasing demand on end of life education in medical schools. While most students learn about the various aspects of palliative care, death, dying, and the ethical considerations in the classroom, best practice models for teaching these sensitive issues at the bedside are virtually absent. At the same time, simulation centers increasingly shape modern medical education in German speaking countries around Europe (1,2). Indeed, as skill requirements increase and catalogs like the Canadian CANMEDS acting model (3) or the German NKLM (the National competency-based learning-goal catalog) (4) are being used as guiding principles in different fields of medical education. Simulation centers possess various advantages: students feel comfortable in these simulated situations appreciating the possibility to make mistakes in a controlled surrounding, getting professional feedback and using the opportunity of repetition. For faculty, medical education within simulated situations becomes easy to plan and control (5).

At the same time, bedside teaching is losing its relevance in medical education. However, for apprentices the experience of direct contact to real patients cannot be substituted by simulating scenarios (6,7). Bedside teaching has shown to improve clinical skills and abilities even allowing to enhance the self-assessment by students (8). Direct contact to cancer patients has shown to cause a stronger beneficial effect on communication skills than contact to patients with other diagnoses (9). Sir William Osler [1849–1919] a pioneer of medical education, said: "*Medicine is learned by the bedside and not in the classroom!*" (10). When planning bedside teaching in the palliative care settings, further aspects need to be considered: (I) patients and students facing with end-of-life aspects will experience emotional challenges—however, these will be different for students and patients; (II) students' education must by no means cause any discomfort for the patients; and (III) there are the interests of the nursing staff who often appear paternal towards patients comfort and therefore object bedside teaching (11). However, bedside teaching assures the close interaction between apprentice and patient with their own individual distress and personal experience facing incurable illness in real life, not just by means of physical distress but also experiencing fundamental effects on psychosocial and spiritual well-being. In 2011, Harris suggested implementation of certain strategies and rules for bedside teaching in palliative care settings to minimize the potential disadvantages for students and patients (12). However, the overall assumption that terminally ill patients should be excluded from bedside teaching has not been confirmed in the literature (13).

The aim of this study was twofold: (I) to analyze the perception of bedside teaching on a palliative care ward from the perspectives of students, staff members and patients; and (II) to define the prerequisites for an efficient and patient-centered bedside teaching on palliative care wards.

Methods

Clinical context

The 14-bed facility is cared for by nine nurses, two doctors, a social worker, a documentarist, a psycho-oncologist and members of the physiotherapeutic care team for the inpatients. Various volunteers complete the team.

Study design

Elective courses "Intensive Practical Training Palliative care" on the palliative care ward were offered in two consecutive terms—summer 2016 and winter 2016/2017—to students in their clinical educational phase.

These courses were structured the following: Each student was assigned one patient each on two consecutive days. The respective patient's records were made available to the students before they were asked to interview and examine their patients. The students were then asked to draft a treatment plan that met the standards of palliative care and included appropriate laboratory diagnostics, imaging procedures, drug therapy, drugs on demand as well as additional invasive and noninvasive therapies where necessary. During the course, all anamnestic and laboratory findings and prescriptions were discussed in plenary seminars in the absence of any patient. Conspicuous findings mentioned by students were reviewed and then re-examined at the bedside. The course was completed by a bed sided mini-clinical examination that was graded by one faculty member.

Participants

Patients

All inpatients were screened for eligibility of participation. Exclusion criteria were low performance status, high symptom load, short life expectancy and short time of

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Table 1 Pertinent questions posed to participants

Patients
What are the reasons for taking part in bedside teaching?
What were your experiences in regard to bedside teaching?
What do you expect from students at the bedside?
Do you think bedside teaching is challenging to the students?
What do you think about being a teaching object?
Do you think teaching on palliative care wards is adequate?
Was the teaching experience a struggle for you?
What burdens did you perceive due to bedside teaching?
How did you feel when students and teacher talked about you at the bedside?
Did you learn something for yourself?
Did you have any benefit from bedside teaching?
Students
Please explain what you learned?
What medication do you know for symptom control? (specified to pain, shortness of breath, nausea and vomitus, edema, fear)
How would you define palliative care? Name specialties!
Explain procedure of the course!
Do you consider it to be a burden for yourself that the patient is confronted with dying?
Do you think you would benefit from professional help by dealing with dying of the patients? Can you describe special situations during the seminar?
What structures would help you coping with death and dying of patients?
Staff members
What are your experiences with bedside teaching?
How do you perceive bedside teaching regarding
Patients
Family/Care Givers
Students
Staff

stay on ward. Included patients were informed about the forthcoming student teaching and were invited to participate in the bedside teaching. Patients' agreements were obtained at least 24 hours prior to the upcoming teaching unit. On some days, no patient consented or did not qualify for participation due to symptom load or low ECOG performance status. Therefore, individual patients volunteered for different students on two consecutive days. One patient participated but died before the final bed sided mini-clinical examination. The evaluation of patients' perceptions were carried out in the form of semi-structured interviews (*Table 1*). Interviewers were instructed how to lead through the interview. Each patient was only interviewed once, even though some patients were available for two students on different days. Interviews were held without any interruption and lasted 20 to 45 minutes in either single or double bed rooms on the ward.

Students

Students who enrolled in the elective course "Intensive Practical Training Palliative care" were invited to participate in this study. Participants were assessed by self-constructed questionnaires both, before and after completion of the course. Students were asked to answer open questions about special features of the palliative care situation. There was no time limit for working through the questionnaire, the process was not interrupted.

Staff

Members of the palliative care team were also invited to participate in this study and answer a questionnaire concerning their perception of different aspects of bedside teaching on the palliative care ward. Those who participated were either providing primary or secondary patient care or were voluntary workers.

All participants were directly approached by the same person and invited to participate in the study. Participation was strictly voluntary. Inclusion required the signing of an informed consent form.

Data collection and analysis

Patients and students were asked to report their experiences during bedside teaching, staff members were not part of the respective courses and expressed their perceptions of bedside teaching on the palliative care ward retrospectively. Data were then analyzed qualitatively following the framework approach (14,15), using the subsequent steps: (I) familiarization with the data, (II) identification of initial categories, (III) generation of initial themes, (IV) development of a coding matrix and assignment of suitable data into the matrix; (V) re-reading through the data and re-organization of initial themes into more abstract categories to formulate final themes (VI) combine final themes into

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Table 2 scheme of data analysis (18)

Overall approach	Step	Stage	Description	Notes for this study
Data management	I	Familiarization with the data	Reading through the data multiple times	Repeated several times to get familiar with data
	II	Identification of initial categories	A list of categories is being generated whilst reading	Coding of meaningful categories out of initial in-vivo thoughts
Descriptive accounts	III	Generating initial themes	Common categories are summarized to themes	As initial categories increased in numbers, they were combined to initial themes
	IV	Reviewing categories and development of a coding matrix	Keeping, combining and rejecting of categories	The following iteration process reduced the range and diversity of coded data by refining initial themes and categories
Explanatory accounts	V	Defining and naming final themes	"Emerging the whole"	By ongoing review of the data final themes are being developed
	VI	Combine final themes into core concepts	Developing more abstract concepts	The final themes are condensed to main core concepts to focus on explanation

core concepts (16,17) (*Table 2*). The aim was to recruit sufficient participants in each group of patients, students and staff to reach a saturation of arguments. Saturation was assessed by an ongoing analysis of the interviews (*Figure 1*).

Results

A total of 20 patients, 21 medical students, and 19 staff members participated in the study and provided for a saturation of arguments. Qualitative analysis of the data following the framework approach revealed five core concepts related to bedside teaching on the palliative care ward. These core concepts are based on pertinent comments (*Table 3*) and can be summarized as follows:

Core concept 1: best possible end-of-life education for students

Most patients participating in the course saw the need of best possible education in all subjects. Patients stated that bedside teaching was a good option to teach students. Being a part of the process made patients proud as expressed by a patient as follows: "*I hope I can help them……understand my very special situation.*"

Students enjoyed being around real patients. Their perceived learning input increased due to reality (manuscript in preparation). Some students mentioned bedside teaching to be the most important part of teaching medicine, irrespective of the clinical subject. Treatments in palliative care setting usually aim at achieving the best possible quality of life rather than pointing at the cause. This major difference was recognized by most students.

For team members, bedside teaching is an important way of teaching and learning. None of the team members questioned bedside teaching as a fundamental part in medical education, not even in palliative care.

Core concept 2: benefit of bedside teaching for participants

Patients mostly wanted to help. Two themes emerged repeatedly during the interviews—being helpful for students so that they will understand the subject and helping in improving the education of future doctors so that future patients will benefit from better care. "*Making the best out of it.*" Some patients felt bored and left alone on the ward. However, these feelings did not correlate with any contact to family members, frequencies of visits or nearness of home. Even though one patient stated that he didn't have any contact at all, this patient did not mention diversion to be his first motivation to take part in the seminar. He declared: "*I am here, and I don't have anything else to do!*" Further on the same patient mentioned that the visit of the students was a "nice diversion, but no enrichment!" Another patient mentioned "Boredom!" as his major motivation factor. Some patients mentioned better care as a motivating factor to participate in bedside teaching.

Students enjoyed the benefit of reality as they mentioned that real life experiences to be more effective than theory-

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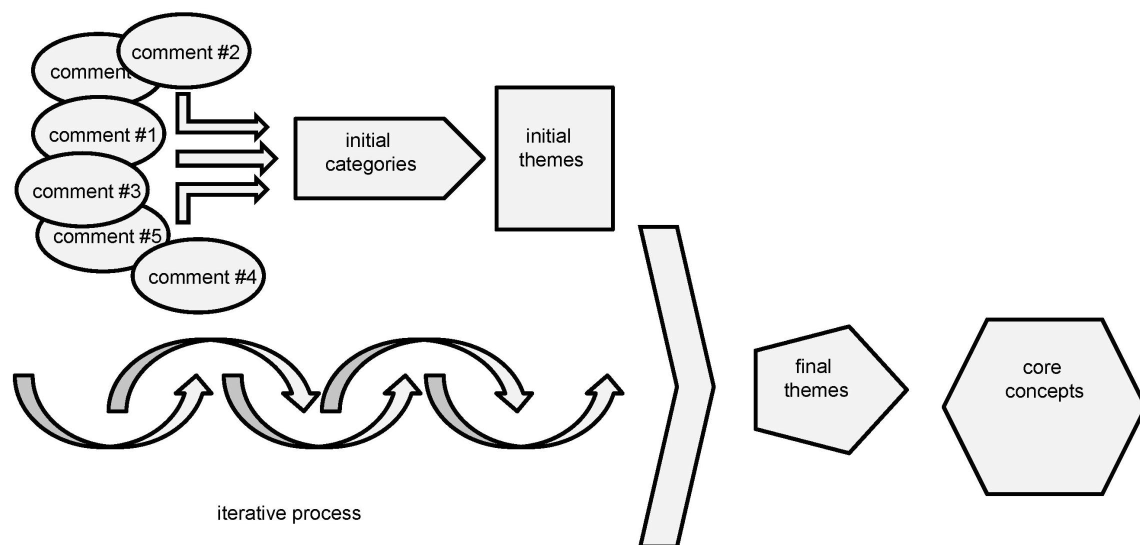

Figure 1 Data-analysis. Comments from the participants are coded into initial categories which are then summarized into initial themes. After several iterative rounds, final themes emerge from which abstract concepts are being developed.

based seminars.

Team members of nursing staff expected the students to help during daily routines, and were irritated by the lack of benefit for themselves. In contrast, physicians appreciated the students questioning daily routines and standard procedures as they were forced to re-evaluate and were at times prompted to optimize standard operations.

Core concept 3: gain in knowledge, skills and competences

The gain in knowledge, skills and competences applied to students only and will be evaluated quantitatively and described elsewhere. In short, special fields of knowledge were medical treatment, phases of dying or definitions of palliative care and were compared before and after the course on bedside teaching. Practical skills like communication with terminally ill and dying patients were part of the hidden curriculum.

Core concept 4: disturbances to patients and team

Symptom load is one of the aspects in palliative care that can lead to termination of bedside teaching. Palliative care patients as inpatients are usually impaired by distressing symptoms and some patients denied participation in bedside teaching because of breathlessness, fatigue or need of tranquility. However, none of our patients who was eligible for bedside teaching and agreed to participate terminated the student contact due to symptom load.

Patients had clear expectation about what students were allowed to do. To the question what they would expect from students several patients answered that they expected students to know their abilities and respect their limitations. Some patients feared that the contact with students would worsen their own grief.

All members of the team have a tight time schedule. Due to understaffing patient care, communication needs, need of medical decisions and educational obligations might compete with each other. Staff members perceived this as a threat. "*Since we have a lack of physicians, teaching cannot be taken over by our ward physician if teaching has to take place, please only with an additional external teacher.*" (nurse).

Core concept 5: reflections on death and dying

Patients became aware of their situation being faced with students. This resulted in pronounced sadness, sometimes even caused by sad looks on the side of the students.

Students participating in our seminar did not mention fear or grief to be a major issue after experiencing palliative care education at the bedside.

Discussion

Because a single patient can tell better than a thousand slides and because experience is sometimes worth more than

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Table 3 Core concepts and comments

Core concept	Pertinent comments
Best possible end-of-life-education	"I wanted to help students to experience a better education. I had to learn, too, once!" (patient)
	"One patient didn't want to tell her daughter that she would have to die soon. What a terrible situation for everybody!" (student)
	"I was overwhelmed by the fate of "my patient", who felt like living for years on Friday and died over the weekend. He didn't believe the doctors, he felt so good, and then he actually died. Good thing he didn't know, sad thing he didn't know!" (student)
	"I hope "my patient" will be without pain when she dies, that was her biggest last wish!" (student)
	"Low dose morphine against shortness of breath." (student)
	"Early integration of palliative care into medical education to form attitudes – this appears very important to me!" (nurse)
	"Our doctors give on important knowledge to the students. It appears to be important, no matter what the students are planning to do later in life." (nurse)
Benefit of bedside teaching for participants	"I wanted to help those students and other patients that will be in my situation!" (patient)
	"This was really good diversion, I even could go outside and smoke a cigarette with the student and didn't have to ask the nurse!" (patient)
	"I took part in a very emotional talk concerning the fate of one family! I am grateful for that experience." (student)
	"Now I understand the special burdens of pruritus!" (student)
	"I might profit from new ideas and suggestions by the students." (physician)
	"Students deliver new impulses, have other, unconcerned views, and suggestions for improvement. I was forced to self-questioning and reflection of my work." (physician)
Gain in knowledge/ skills/ competences	"…a little confidence in what will come next can open up new ways that haven't been there before." (student)
	"I was forced to subscribe medication and actually think about it." (student)
	"I saw an ascites puncture for the first time." (student)
	"Working in teams, interdisciplinary, and carrying on the thought of hospice care!" (volunteer coordinator)
Disturbances to patients and team	"Well, I have pain and dyspnea, it can be strenuous, but if it (bedside teaching) goes slow, everything is fine." (patient)
	"I have a dry mouth when I have to speak a lot and the air is scarce!" (patient)
	"I suddenly became aware of my fate, perhaps because the student looked so sad." (patient)
	"Family care givers want to have undisturbed contact to the patients. It could be very annoying when students keep patients away from their family." (nurse)
	"Our doctors are being distracted by the students." (nurse)
	"Students should be on the ward for at least a week, otherwise they disturb the routine!" (physician)
	"Students disturb daily routine and don't see the work!" (nurse)
Facing death and dying	"I suddenly became aware of my fate, perhaps because the student looked so sad." (patient)
	"I feel pity, but my mood is not impaired!" (student)
	"Sometimes I am afraid to say something wrong or stupid!" (student)
	"I could imagine certain situations so that I needed professional counselling, for example if patients were my age." (student)
	"I don't feel sad, I am uncertain about dealing with it (palliative care setting), but I don't consider it to be a burden!" (student)

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what we read or hear—no theoretically based seminar can ever replace real life medicine (19). All of the team members recognized palliative care as a very important field in medical care and none of them questioned bedside teaching as a fundamental part in medical education, not even in palliative care. However, medical education in palliative care differs from other subjects, particularly by addressing death, dying and taking care of people that won't be cured again. The goals and treatment approaches might therefore be different. Understanding the difference between curative and palliative medicine is therefore a fundamental goal in palliative care education.

Patients in palliative care situations were previously cited to consider bedside teaching as valuable (20). Indeed, the responses of our patients taking part in the present study support this view. Being helpful to future patients and physicians as well as killing boredom and seeking distraction were intrinsic motivation factors. However, a careful selection of participating patients is required in order to protect patients with high symptom load, numbness, fatigue or mental restriction. The consciousness of death and dying and worsening of symptom load might disturb patients. It is therefore mandatory and within the responsibility of the teaching staff that the patients are informed about all steps of the course and that the bedside teaching can at any time be terminated by the patients.

Students' experiences with dying patients are considered to induce a long-term change of attitudes (21). However, most faculties address these experiences within a hidden curriculum (21). Our cohort of students confirmed the benefit of direct contact to patients in palliative care situations and thus support previous recommendations for thoughtful, integrative and interdisciplinary curriculum changes in end-of-life education as psychological and emotional experiences cannot be taught in the classroom (22). Subsequent to the bedside teaching on a palliative care ward, students should be given the opportunity to reflect on what they experienced (23). And even though our students did neither mention fear or grief to be a major issue after experiencing palliative care education at the bedside nor did they express a need for psychological guidance, certain constellations might require professional help which should therefore be kept at hand.

Little is known about the perception of bedside teaching by staff members. Especially the nursing team appears to be paternal towards patients' needs for quietness and tranquility (12,13). And while the staff's reservations towards bedside teaching need to be acknowledged, one step towards alleviating these concerns may include a clear communication. Nursing staff members need to be informed about the goals of the bedside teaching, the teaching methods and the teaching staff involved (20). Moreover, they need to be aware of all steps of the teaching course, the time course, which tasks can be delegated to students and they need to know the termination rules. As of yet there is no report on the teaching staffs' perception of bedside teaching in palliative care. Being triggered to re-evaluate common and standard procedures on the ward is therefore a valuable experience but may be limited to those who are open minded enough to get involved with the young and inexperienced.

There are limitations to our study and they include the numbers of participants. Even though a saturation of arguments was achieved, the present study focused on the statements of very heterogeneous groups. It was intended as an orientating survey to investigate perceptions of bedside teaching from different yet interacting points of view. To the best of our knowledge, this is the first study with this particular research question and it proves that the individual perceptions of bedside teaching are heterogenic. Future studies need to address long term benefits as well as possible negative consequences for patients, students and staff members.

Conclusions

The first aim of this study was to analyze the perception of bedside teaching on a palliative care ward from various perspectives. Both, patients and students mostly enjoyed each other's contact, even though for different reasons. While some of the patients suffered from the renewed confrontation with their own unfavorable fate, none of the students reported any distress from the contact with dying patients. The nursing team felt ambiguously: on the one hand they acknowledged bedside teaching as an important means to teach palliative care, but on the other they expected the students to be of help yet experienced them as an additional burden. The teaching staff perceived the students as an enrichment that triggered the re-evaluation of standard procedures on the ward.

The second aim was to define the prerequisites for an efficient and patient-centered bedside teaching on palliative care wards. The results from our qualitative analysis suggest that bedside teaching requires:

(I) A clear targeted communication to students and staff alike about the goals of the teaching and the

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responsibilities of those involved;

(II) Strict exclusion criteria for the participating patients (high symptom load);

(III) Empowerment of patients to determine the course, rate and termination of bedside teaching;

(IV) Rules for the patient—student contact: no more than two students per patient, no more than 15 minutes contact at a time;

(V) Sufficient time slots to address the patients' and students' needs for psychological guidance, for example 15 minutes at the end of each working day;

(VI) No less than 5 days duration for the course.

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: Ethical approval was obtained from the local Ethics Committee of the Rostock University Medical Center (Number A2015-0167). All participants were directly approached by the same person and invited to participate in the study. Participation was strictly voluntary. Inclusion required the signing of an informed consent form.

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