

available at www.sciencedirect.com

ELSEVIER

journal homepage: www.ejconline.com

Consultation in palliative care: The relevance of clarification of problems

Myrra J.F.J. Vernooij-Dassen^{a,*}, Marieke M. Groot^b, Josien van den Berg^b, Annemieke Kuin^c, Barbara A. van der Linden^d, Lia van Zuylen^e, Ben J.P. Crul^f, Richard P.T.M. Grol^b

^aCentre for Quality of Care Research (WOK) and Vocational Training General Practitioners, 117 Radboud University Nijmegen Medical Centre, P.O. Box 9101, 6500 HB Nijmegen, The Netherlands

^bCentre for Quality of Care Research (WOK), Radboud University Nijmegen Medical Centre, P.O. Box 9101, 6500 HB Nijmegen, The Netherlands

^cInstitute for Research in Extramural Medicine, Department of Public and Occupational Health, VU University Medical Centre Amsterdam, Van der Boechorststraat 7, 1081 BT Amsterdam, The Netherlands

^dJulius Center for General Practice and Patient Oriented Research, University Medical Centre Utrecht, P.O. Box 80035, 3508 TA Utrecht, The Netherlands

^eDepartment of Medical Oncology, Erasmus MC-Daniel den Hoed Cancer Centre, Groene Hilledijk 301, 3075 EA Rotterdam, The Netherlands

^fPain Centre, Radboud University Nijmegen Medical Centre, P.O. Box 9101, 6500 HB Nijmegen, The Netherlands

ARTICLE INFO

Article history:

Received 18 July 2006

Received in revised form

29 September 2006

Accepted 5 October 2006

Available online 17 November 2006

Keywords:

Integrated care

Transmural care

Professional collaboration

Shared decision making

Cancer patient

Health services research

Quality improvement

ABSTRACT

This study aims to determine the extent and nature of problems in palliative care that are newly identified in the consultation process and the factors influencing their identification. The consultation process includes clarification of problems mentioned by professionals requesting advice. Data are derived from the standard registration forms of Palliative Care Consultation teams. Multilevel logistic regression analysis was carried out with newly identified problem as dependent variable. Fifty seven percent of problems ($n = 7854$) were newly identified. Most newly identified problems were related to physical and pharmacological problems. If psychosocial/spiritual problems were identified, this occurred in most cases through clarification (70%). Newly identified problems were more likely to be identified in the domain of spiritual and psychosocial problems, in bedside consultations, in requests from clinical physicians, and for patients accommodated in a hospice or hospital. Explicit clarification of problems facilitates the identification and addressing of a more comprehensive and specific scope of problems.

© 2006 Elsevier Ltd. All rights reserved.

1. Introduction

Palliative care requires professionals to address patients' physical, psychosocial, and spiritual needs.¹ Fulfilling specialist requirements is difficult for a professional when palliative care is not the main focus of daily activity. General practitioners for example lack specialist knowledge and

skills on symptom treatment. Furthermore, they are unacquainted with the activities of other health care professionals.² As a result, important available resources and expertise are underused. The formation of Palliative Care Consultation (PCC) teams was stimulated within a national programme to improve palliative care. In such a team, experts from several disciplines and settings (hospital and primary care) work

* Corresponding author: Tel.: +31 24 3615300; fax: +31 24 3540166.

together to provide consultation for other professionals with less experience.³ With a few exceptions, these teams are multidisciplinary. The exceptions are teams consisting solely of general practitioners or nurses specialised in palliative care.

The teams override the usual boundaries between healthcare disciplines in a joint attempt to address the problems of a specific patient. The agenda is set by the problems related to a specific patient rather than to the rules and structure of the disciplines and organisations involved. The teams cross the boundaries between settings and disciplines, thus providing transmural or integrated care.⁴ In doing so and in being meticulous about leaving the responsibility for care in the professional requesting advice, the teams present an example of how transmural collaboration at the interface of different disciplines can be used to improve the quality of care.

The quality of support and advice given to professionals in palliative care depends not only on the palliative care expertise of the consultant, but also on the quality of the professionals' interaction. Consultation refers to the process of one professional requesting advice from another more experienced professional. Without a clear expression or identification of the problem, inappropriate actions might be proposed.⁵ Adequate clarification of the questions and problems posed and exploration of the problem context offer the opportunity to identify the scope of problems related to the palliative phase of a disease. A more specific and comprehensive overview of problems would lead to a better understanding of the problems that should be addressed and the priorities that should be set in addressing these problems. A previous 1-year study of the PCC teams revealed that more than 50% of all the advices they gave were based on problems identified through clarification and exploration; these problems were not mentioned in the initial request for consultation.³ In this study, we focus on these newly identified problems. They include (a) those identified in the clarification and exploration of the problems initially mentioned by professionals requesting advice and also (b) addressed in the advices given. The aim of this study is the identification of the nature and extent of problems derived from explicit clarification in palliative care consultations and to investigate the factors influencing whether or not such new problems are identified. It is hypothesised that newly identified problems arise most often in the domain of psychosocial and spiritual problems, since the primary reason for requesting medical consultation is the patient's physical problems⁶ and professionals might hesitate to ask consultation for non-medical problems.

Consultation: the process of a professional requesting advice from another more experienced professional.

Request for consultation: a less experienced professional requesting advice and support from a Palliative Care consultation Team. One request can contain several (initial) problems.

Initial problem: a patient-related problem posed by the professional requesting consultation.

Newly identified problem: (a) problems identified through the clarification and exploration of the problems initially mentioned by the professional requesting advice and also (b) addressed in the advices given.

Clarification: retrieving more explicit information on problems mentioned by the professional requesting consultation.

Exploration: investigation of the context of problems (other domains of palliative care, for example).

2. Patients and methods

2.1. Respondents and design

Respondents were PCC teams registering their consultations. A national prospective study was conducted, registering all consultations of the PCC teams throughout a period of 2 years. In the period 1st March 2001–1st March 2003, PCC teams participated in this descriptive study by systematically recording the requests they received for consultation.⁶ Some teams are based in hospitals, some in a primary care setting. Most teams are multidisciplinary and support professional caregivers working within as well as outside healthcare institutions. The teams consist of professionals from several disciplines, including general practitioners (GPs), nurses, clinical physicians, and nursing home physicians. Clinical physicians are specialised physicians like neurologists, they are often referred to as consultant physicians, but the term would be confusing in the context of this article. All team members have at their disposal their own expertise gained through training and experience and the expertise of fellow team members. The PCC teams conduct two sorts of consultations: (1) telephone consultations with the consulting professional and no contact at all with the patient and (2) bedside consultations in which the expert sees and speaks with both the consulting professional and the patient. All PCC expert teams are accessible during office hours; a few teams can be reached 24 h a day, 7 d a week.

PCC teams were specially trained in the clarification and exploration of problems and in sharing decisions on treatment with other professionals.

2.2. Data collection

Each consultation was registered with the aid of a common registration form developed by a national multidisciplinary group of researchers on the basis of previous pilot studies undertaken by the different PCC teams and a literature study. The form contained questions on the characteristics of the requesting caregiver and the patients involved.³ In addition, the initial problems posed by the professional requesting consultation (initial problems), and the newly identified problems were registered by the consultant. All data were entered into a national computerised database. To prevent selective non-response, missing items were systematically checked with the consultant and the form completed as far as possible. Registration forms were entered into a Microsoft Access database.

2.3. Instruments

The following data were collected on the determinants of the presentation of newly identified problems:

- (a) domain of palliative care: physical/pharmacological problems; psychosocial/spiritual and organisational problems (reference category)
- (b) discipline of the requesting professional: nursing home or clinical physician; district nurse; clinical nurse and general practitioner (reference category)
- (c) discipline of the professional providing advice: nurse (district or clinical nurse); nursing home or clinical physician; and general practitioner (reference category)
- (d) type of consultation: telephone or bedside consultation
- (e) patient characteristics: patient's age was classified into <70 and ≥70 years of age; residence into home; hospital; nursing home and hospice. Patient's diagnosis was classified into oncological disease or other; prognosis into >1 month; or ≤1 month; functional status into ECOG-02 and 3–4.

2.4. Analysis

Descriptive information is first given on the initial problems and the newly identified problems. In addition, the new problems most frequently identified are presented per domain. Problems in palliative care were classified into three domains: physical/pharmacological problems; psychosocial/spiritual; and organisational problems.

Multilevel logistic regression analysis was conducted to determine the factors influencing the presence of newly identified problems. We applied multilevel logistic regression because of the hierarchical structure of the data (with problems nested within patients). The dependent variable was the presentation of at least one newly identified problem (yes/no); the independent variables were the domain of palliative care problems, the disciplines of the requesting professionals, the disciplines of the professional providing advice, the type of consultation, and patient characteristics. The multilevel logistic model included a random intercept and fixed effects for the independent variables. The multilevel logistic model was built by backward rejection of explanatory variables with insignificant fixed effects. The high number of cases allowed to include all explanatory variables included in the study. The level of significance was set at $p < 0.05$. We assessed the association between the variables by odds ratios, with 95% confidence intervals.

3. Results

In the period from 1st March 2001 to 1st March 2003, 21 PCC teams participated in this descriptive national study. Twenty-three PCC teams were involved, covering two-thirds of the country. Two teams did not participate in our study: one used a different registration method; the approach to consultation of the second lacked comparability. The areas covered by the teams varied from 20,000 to 2.2 million inhabitants.

Table 1 describes the study population. In this study on consultations in palliative care, we focus on the regions involved in the study. Per region we provide information on a number of teams, requesting professionals and patient

characteristics. Five regions with 21 PCC teams have been involved in this study. Most teams were multidisciplinary. The number of teams per region varied from 1 to 8. The number of patient-related requests for consultation was 3416. The use of bedside consultations varied from 4% ($n = 17$) in region 1 to 44% in region 2. The majority of requests for consultation in each region came from general practitioners: 83% in region 5 to 48% in region 2. Patient prognosis of 1 month or less varied from 46% in region 2 to 73% in region 5.

The number of initial patient-related problems was 6001; the number of newly identified problems after clarification and exploration by the experts was 7854; the total number of problems was thus 13855. The percentage of newly identified problems in this 2-year period was 57%. Of the physical problems, 53% were newly identified; the share of newly identified problems in the psychosocial domain was 70% and in the organisation-of-care domain it was 52% (Table 2). With respect to bedside consultations, 69.5% of all problems were newly identified through clarification; this percentage was 47.4 for telephone consultations. The highest percentage of newly identified problems (71.9%) was found when clinical physicians requested a consultation. Patient characteristics had little influence on the identification of new problems. The percentage of newly identified problems among persons younger than 70 years of age (58%) is similar to that for persons aged 70 and older (57%).

Table 3 presents the five most prevalent newly identified problems per palliative-care-problem domain. The most prevalent newly identified specific physical problem was pain. Although pain problems were often mentioned initially, the percentage of newly identified pain problems was 31.5%. Constipation problems were mostly identified in the exploration and clarification procedure (79.4%). This procedure also revealed more than 50% of the problems related to choice of dosage of medication. The majority of the specific psychosocial and spiritual problems were such newly identified problems as acceptance of illness (75.1%) and grief (79.5%).

Table 4 presents the results of the multilevel logistic regression analysis. With respect to the variance in the newly identified problems, about 29.9% was accounted for by the domains of palliative care problems, type of consultation, type of professional requesting advice, and residence. Newly identified problems were found in the domain of psychosocial and spiritual problems more often than in organisational problems and than in physical and pharmacological problems. They were also more often found in bedside consultation, when the requesting professional was a clinical physician rather than a general practitioner, and in a hospice or hospital setting rather than a home situation. Newly identified problems were found less often when the requesting professionals were district nurses rather than general practitioners. No significant influence was found of the disciplines of the professional providing consultation, the age of the patient, the patient's diagnosis, the patient's prognosis or the patient's functional status.

4. Discussion

Explicit clarification and exploration accounted for 57% of the problems dealt with by the expert palliative consultation

Table 1 – Characteristics of PCC teams, professionals requesting consultations and patients per region

	Region 1	Region 2	Region 3	Region 4	Region 5
Number of teams	6	1	4	8	2
Number of patient-related requests for consultation	421	698	880	744	673
Type of consultation					
Bedside	17	307	311	289	53
Telephone	404	391	569	455	620
Total	421	698	880	744	673
Profession requesting care provider					
Nursing home physician	10	11	15	24	26
Clinical physician	9	105	191	29	53
District nurse	50	38	56	124	17
Clinical nurse	20	206	166	94	16
General practitioner	332	338	452	473	561
Total	421	698	880	744	673
Patient characteristics setting					
Hospital	14	148	223	32	59
Nursing home	32	34	41	54	39
Hospice	24	103	10	23	22
Home	332	397	572	606	528
Other	6	13	10	9	9
Missing	13	3	24	20	16
Total	421	698	880	744	673
Age					
<70 year	168	343	521	368	377
70 years and older	163	307	324	246	489
Missing	90	50	52	52	50
Total	421	698	880	744	673
Diagnosis					
Oncological	344	648	792	676	610
Non-oncological	71	49	74	58	47
Missing	6	1	14	10	16
Total	421	698	880	744	673
Prognosis					
>1 month	138	365	284	249	138
1 month or less	279	323	551	473	489
Missing	4	10	45	22	46
Total	421	698	880	744	673
ECOG					
0–2	74	117	136	104	76
3–4	331	568	675	619	538
Missing	16	13	69	21	59
Total	421	698	880	744	673

teams. The majority of these newly identified problems were physical and pharmacological in nature. Problems presented in the psychosocial/spiritual problems domains were mostly identified by clarification and exploration by the experts during the consultation. Newly identified problems were also more likely to be identified in bedside consultation, when the requesting care provider was a clinical physician, and when the patient was accommodated in a hospice or hospital.

These results underline the importance of the explicit clarification and exploration of the initial problems posed by

professional carers. Such exploration facilitates the formation of a comprehensive and specific overview of problems. High percentages of certain specific problems such as choice and dosage of medication and patient grief were identified. In contrast with our expectations, most newly identified problems were found in the physical and pharmacological domain. However, the highest percentage of newly identified problems was found in the domain of psychosocial problems (including spiritual problems): 70% of these problems were identified by exploration and clarification. Since these are

Table 2 – Frequencies and percentages of newly identified problems and characteristics of consultation in palliative care

Categories	Initial problems	Newly identified problems	Newly identified problems/ total number of problems per category
<i>Problem category</i>			
(a) Physical/pharmacological	4262	4863	53.3
(b) Psychosocial/spiritual	873	2071	70.3
(c) Organisational	866	920	51.5
<i>Type of consultation</i>			
(a) Bedside	1778	4055	69.5
(b) Telephone	4223	3799	47.4
<i>Professional requesting consultation</i>			
(a) Nursing home physician	143	147	50.7
(b) Clinical physician	695	1782	71.9
(c) District nurse	468	399	46.0
(d) Clinical nurse	689	1453	67.8
(e) General practitioner	4006	4073	50.4
<i>Consultant</i>			
(a) Nursing home physician and medical specialist	1276	1350	51.4
(b) General practitioner	284	259	47.7
(c) Nurse	4441	6245	58.4
<i>Setting</i>			
(a) Hospital	708	1708	70.7
(b) Nursing home	386	348	47.4
(c) Hospice	177	520	74.6
(d) Home	4540	5055	52.7
<i>Age</i>			
<70 year	3272	4542	58.1
70 years and older	2219	2896	56.6
<i>Diagnosis</i>			
Oncological	5444	7268	57.2
Non-oncological	496	548	52.5
<i>Prognosis</i>			
>1 month	2044	3110	60.3
1 month or less	3780	4581	54.8
<i>ECOG</i>			
0–2	856	1191	58.2
3–4	4881	6447	56.9

the most prevalent problems of patients in the palliative phase of the disease⁷, it is important for PCC teams to be alert to them.

In line with the results of Koedoot and colleagues, the characteristics of the person requesting a consultation influenced the communicative behaviour of the professional giving it.⁸ The higher likelihood of identification of new problems in the clinical setting as compared to home care setting might be related with the more specialised perspective of that setting as compared to the more holistic perspective prevalent in primary care and in the face to face contact with the professional requesting advice and the patient.

Despite the differences in disciplines involved in the consultation teams, no significant difference was found between professionals providing consultation, nor were patient characteristics influential. The specific training in exploration and clarification seems to be effective.

The expertise of several health care disciplines is used through the mediation of one team member. This team approach is convenient for the person requesting consulta-

tion. The joint endeavour of professional carers of several disciplines to address the problems of a specific patient is efficient. In addition, this model of transmural collaboration stimulates the use of available resources. Moreover, leaving the responsibility to the professional requesting advice resolves the key problem in transmural care: the division of responsibilities.

Palliative care consultation depends on good communication. In this, the explicit clarification and exploration of problems is a first and crucial step in consultation communication. Further steps to be taken include the explicit agreement of problem definition, the discussion of treatment options, and the final decision on how the professional requesting advice should treat the patient. Processes of this kind between patients and physicians are described as *shared decision making*. Clinicians using shared decision making perceived significantly higher patient satisfaction with the information given and general overall satisfaction with the consultation.⁹ However, little is known about the use of the shared decision making model among professionals. Evaluation of the palliative

Table 3 – Nature and extent of five most prevalent newly identified problems per domain

Specific problems	Number of initial problems	Number of newly identified problems	Number of specific newly identified problems/total number of specific problems
<i>Physical/pharmacological</i>			
Pain	1109	510	31.5
Choice medication	334	403	54.7
Constipation	103	396	79.4
Application form	221	392	63.9
Dosage medication	255	269	51.3
<i>Psychosocial/spiritual</i>			
Anxiety	132	278	67.8
Agitation/confusion	209	207	49.8
Acceptance illness	50	151	75.1
Lack of informal care	52	133	71.9
Grief	34	132	79.5
<i>Organisation of care</i>			
Use of materials	153	232	60.3
Use of professional care	81	202	71.4
Coordination of care	80	159	66.5
Inventory care situation	212	122	36.5
Support care transition	105	73	41.0

Table 4 – Multilevel logistic regression analysis. Odds ratios (OR) and 95 percent confidence interval (CI)

	OR	95% CI	Prob.
<i>Problem domain</i>			
(a) Physical/pharmacological	1.20	1.07–1.35	
(b) Psychosocial/spiritual	2.24	1.95–2.57	
(c) Organisational	Ref.		0.0001
<i>Type of consultation</i>			
(a) Bedside	2.22	1.93–2.55	
(b) Telephone	Ref.		0.0001
<i>Professional requesting consultation</i>			
(a) Nursing home physician	1.08	0.72–1.63	
(b) Clinical physician	1.37	1.09–1.73	
(c) District nurse	0.78	0.63–0.97	
(d) Clinical nurse	1.19	0.96–1.47	
(e) General practitioner	Ref.		0.0069
<i>Setting</i>			
(a) Hospital	1.29	1.05–1.60	
(b) Nursing home	0.83	0.64–1.09	
(c) Hospice	2.65	2.01–3.51	
(d) Home	Ref.		0.0001

consultations teams revealed that two-thirds of the professionals requesting a consultation indicated that the consultation had improved the quality of care and three quarters of them said that the consultation was helpful for the patient.¹⁰ More rigorous evaluation is needed of the process of sharing decisions among professionals and the effects on both professionals and patients with respect to satisfaction with the consultation and compliance with advices given.

5. Limitations

More than 20 different PCC teams completed the registration forms. Although the researchers attempted to diminish the in-

ter-consultant variation by means of repeated written and oral instructions, a limitation of this study is the complexity of both the practice of palliative care consultation and the registration form itself. However, the high numbers of requests for consultation and the nationwide character of the study justify our assumption that the results for the problems experienced in daily palliative care ending in consultation are representative.

The consultation procedure reflects an efficient way of providing transmural collaboration by using the combined expertise of a team. A more thorough problem investigation yielded knowledge over a broader range of problems, including problems that were often mentioned initially, such as pain. The practical implication is that the education and training of consultants should feature not only expert advice and information giving, but also the procedures of the identification and exploration of problems and sharing decisions on treatment with other professionals. The effects on professionals, patients, and their informal carers warrant further rigorous study.

Conflict of interest statement

No conflict of interest has been mentioned.

Acknowledgements

The consultants in the PCC teams are acknowledged for their accurate registration of the consultations. We thank Reinier Akkermans for his statistical advice. This study was funded by grants from the Dutch Ministry of Health and the Comprehensive Cancer Centre Nijmegen (IKO). This study is part of a larger research project which has been approved by the university ethics committee.

REFERENCES

1. Sepulveda C, Marlin A, Yoshida T, Ullrich A. Palliative care: the World Health Organization's global perspective. *J Pain Symptom Manage* 2002;24:91–6.
2. Groot MM, Vernooij-Dassen MJ, Crul BJ, Grol RPTM. General practitioners and palliative care: perceived tasks and barriers in daily practice. *Palliative Med* 2005;19:11–18.
3. Kuin A, Courtens AM, Deliens L, Vernooij-Dassen MJ, van Zuylen L, van der Linden B, et al. Palliative care consultation in The Netherlands: a nationwide evaluation study. *J Pain Symptom Manage* 2004;27:53–6.
4. NRV, *Transmurale somatische zorg. Advies van de nationale Raad voor de Volksgezondheid en het College van Ziekenhuisvoorzieningen* (Transmural somatic care. Advice National Health Council and College Hospital facilities). Utrecht, NRV/CvZ; 1995.
5. Grol RPTM. *Huisarts en somatische fixatie* General practitioner and somatic fixation. Utrecht: Bohn, Scheltema, Holkema; 1983.
6. Groot MM, Vernooij-Dassen MJ, Courtens AM, Kuin A, van der Linden BA, van Zuylen L, et al. Requests from professional care providers for consultation with palliative care consultation teams. *Support Care Cancer* 2005;13:920–8.
7. Osse B, Vernooij-Dassen MJ, Schadé E, Grol RPTM. The problems experienced by patients with cancer, and their needs for palliative care. *Support Care Cancer* 2005;13:722–32.
8. Koedoot CG, Oort FJ, de Haan RJ, Bakker PJ, de Graeff A, de Haes JC, et al. The content and amount of information given by medical oncologists when telling patients with advanced cancer what their treatment options are: palliative chemotherapy and watchful-waiting. *Eur J Cancer* 2004;40:225–35.
9. Elwyn G, Edwards A, Hood K, et al. Achieving involvement: process outcomes from a cluster randomized trial of shared decision making skill development and use of risk communication aids in general practice. *Fam Pract* 2004;21:337–46.
10. Schrijnemakers V, Courtens A, Kuin A, van der Linden B, Vernooij-Dassen M, van Zuylen L, et al. A comparison between telephone and bedside consultations given by palliative care consultation teams in the Netherlands: results from a two-year nationwide registration. *J Pain Symptom Manage* 2005;29:552–8.