Functioning of family nursing in transition: an example of a small town in Poland. Are there any benefits for patients?

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Abstract

Objective To evaluate whether organizational changes in the Polish health care system affected patients' opinions about selected aspects of the quality of care provided by family nurses.

Design Two independent surveys conducted in 1998 and 2002 using face-to-face interviews with structured questionnaires.

Setting and participants The study was performed in a small town in Poland, where family physicians were introduced in 1995. The study groups consisted of two samples of patients randomly selected from those registered on the patient list. Altogether 1000 interviews were obtained in survey I (in 1998) and 1000 from another sample in survey II (in 2002). In 1998, family nurses were employed by family physicians, but in 2002 they had established their own practices and held direct contracts with the National Health Fund.

Results The surveys carried out at a 4-year interval showed a significant increase in the percentage of patients reporting home visits by family nurses, both at the request of physicians and on the nurses' own initiative (from 16.3 to 45.8%, $P < 0.05$). Comparative analysis showed that in survey II the percentage of the respondents who were satisfied with nursing care increased from 35.8 to 53.6% ($P < 0.05$).

Conclusion Care provided by independent nurses was available to a larger group of patients. Patients were more satisfied with the services of family nurses working as independent contractors. The investigations in the present study should be supplemented by a qualitative study.

Introduction

The Polish health care system has changed significantly in the last decade. Changes in the financing of health care, from a budget-financed

system to mandatory health insurance (National Health Fund) have promoted the development of a private sector, including nursing.

In primary care, the institution of the family physician has created new conditions for the

functioning of nursing, and new regulations concerning education and professional training allow for professional independence of nurses in the health care system. In the new primary health care system, nurses not only cooperate with family physicians, but can be also independently involved in family care.

In 1995, the Ministry of Health and Social Welfare published a document entitled 'The outline of community/family nurse competence'. According to this document, basic nursing care tasks are as follows:¹

1. Recognition and evaluation of health needs of families, individuals and community;
2. Services in the field of health promotion and prevention;
3. Health education;
4. Independent nursing services;
5. Co-operation in diagnostic, therapeutic and rehabilitation services;
6. Co-operation with local authorities, social care institutions, associations.

At present, family nursing services can be carried out in various organizational and legal forms:

1. Nurses form their own practices and hold contracts directly with the National Health Fund for specific nursing services. They are independent and can use their initiative within their established competence. Nurses plan and organize their work, manage their practices and take care of equipment.
2. Family physicians sign contracts with the National Health Fund for the provision of care in the field of family medicine, including community/family nursing. Nurses are employed by a physician to provide community health care to all patients registered on the physicians' list.

As family nursing functions in these different organizational and legal forms, there is a need to obtain information about patients' opinions of nursing care. Such information can help health care managers and health authorities choose the best form of health care services.

The aim of the study was to compare patients' opinions on selected aspects of the quality of family nursing at two time periods 4 years apart, during which time the organizational and legal form of family nursing services changed. In 1998, the majority of family nurses worked as employees (salaried workers) of family physicians or public health institutions. In 2002, many nurses established independent practices and signed direct contracts with the National Health Fund.

The following topics were studied:

- patient satisfaction
- number of home visits
- purpose of home visits
- patients' expectations of nurses.

The questions were designed to test accepted assumptions of family nursing in Poland. Number of home visits was selected as an indicator of quality because family nurses are expected to spend most of their working time in their patients' home environment. Health promotion, health education and medical counselling are important tasks of family nurses, in addition to performing typical procedures (injections, diagnostic tests, dressing etc.).

Methods

Setting

The study was carried out in a small town in Poland, where physicians with specialist training in family medicine were introduced in 1995. They provide health care services in family medicine and have patient lists.

The first survey was conducted in 1998. At that time, the contracted health care services of the family physician included family nursing care. Nurses were employed by physicians, provided services at patients' homes and carried out a number of other activities (including registration) in family physician practices.

The second survey was conducted in 2002. Since 2000, nurses have worked as independent practitioners in the field of community/family

nursing, having a contract directly with health insurance institutions. They look after their patients in co-operation with family physicians. At the time of both surveys all nurses had formal family nursing qualifications.

The study group included patients randomly chosen from those registered on the patient lists of a doctor and (or) nurse, who visited the doctor's or nurse's centre or were visited at home by them in the preceding week.

In 1998 (survey I), every fourth person (1023 subjects) was selected from the list of 4092 eligible patients. Altogether 1000 interviews were obtained. In 2002 (survey II), every fourth person (1016 names) was chosen from the list of 4065 eligible patients. As only 988 interviews were obtained, an additional 12 subjects were randomly selected from the list so as to achieve a similar sample size as in survey I.

A structured questionnaire was devised for the survey. The questionnaire contained questions about patient demographics, health status, and various aspects related to family physicians' and family nurses' care (number of home visits, aims of the home visits, expectations of a family nurse). The information was collected by means of face-to-face interviews. The study was preceded by a pilot investigation to elucidate whether questions were properly understood and answered. The questionnaire was slightly modified in survey II – certain questions were deleted, but its form was maintained to facilitate comparison. We analysed only the results related to family nursing services. In both surveys the questions were identical. The respondents were interviewed in their homes by trained interviewers.

Data were encoded and analysed using a packet STATISTICA v.6.0. Chi-square test was used to assess the correlation between two non-measurable features. $P < 0.05$ were considered to be statistically significant. The study had the power of 0.99 to detect changes in satisfaction rates between surveys I and II from 40 to 50% satisfied patients (very satisfied and rather satisfied). The nomogram was used to calculate the power of the study.²

Results

Comparison of the respondents in surveys I and II is presented in Table 1. The sample characteristics in the two surveys were similar.

The analysis of home visits showed a significant increase in the number of people who said they had ever been visited by a family nurse – from 163 (16.3%) to 458 (45.8%). It should be noted that home visits were significantly more frequent in all age groups with the exception of patients of 75 and older (Table 2).

The main purpose of home visits, both in survey I and II was to carry out minor procedures (injections, dressings) (Table 3). In survey II, a significant increase was noted in the number of home visits to carry out these procedures (from 51.5% in survey I to 73.1% in survey II). The percentage of home visits to carry out diagnostic tests (e.g. blood collection) was similar in both surveys (I: 25.1%; II: 23.6%). In survey II, the number of patients visited by a nurse to identify health problems or to provide medical counselling increased markedly. Although the percentage of these patients in relation to the total number of those visited at home was lower in survey II, the number of visits was almost twice as high (Table 3).

Table 1 Comparison of respondents' characteristics in the two surveys

Characteristics	Survey I (<i>n</i> = 1000) (100%)	Survey II (<i>n</i> = 1000) (100%)
Age (years)		
24	118 (11.8)	100 (10.0)
25–44	391 (39.1)	369 (36.9)
45–64	274 (27.4)	278 (27.7)
65–74	142 (14.2)	155 (15.5)
75 and over	75 (7.5)	98 (9.8)
Sex		
Women	689 (68.9)	689 (68.9)
Men	311 (31.1)	311 (31.1)
Education		
Elementary and lower	325 (32.5)	306 (30.6)
Technical	220 (22.0)	223 (22.3)
Secondary	362 (36.2)	383 (38.3)
and post-secondary		
University	93 (9.3)	88 (8.8)

Table 2 Home visits by a family nurse and respondents' age

Age (years)	Number of patients (%)
Under 24*	
Survey I (n = 118)	8 (6.8)
Survey II (n = 100)	34 (34.0)
25–44*	
Survey I (n = 391)	44 (11.2)
Survey II (n = 369)	180 (48.8)
45–64*	
Survey I (n = 274)	24 (8.8)
Survey II (n = 278)	91 (32.7)
65–74*	
Survey I (n = 142)	40 (28.2)
Survey II (n = 155)	83 (54.5)
75 and over	
Survey I (n = 75)	47 (62.7)
Survey II (n = 98)	70 (71.4)

* $P < 0.05$.**Table 3** Purpose of nurse's visit to patient's home

	Survey I (n = 163) (100%)	Survey II (n = 458) (100%)
Aims		
Procedures (injection, dressing)	84 (51.5)	335 (73.1)
Diagnostic test	41 (25.1)	108 (23.6)
Discussing health problems and medical counselling	59 (36.2)	97 (21.2)
Help with obtaining drugs on a prescription	22 (13.5)	27 (5.9)
Bedsore nursing	4 (2.5)	8 (1.7)
Others	11 (6.7)	23 (5.0)

To answer the question about what the patients expected of the nurse, they could either choose from options presented in the question-

naire or state their own expectations (Table 4). Almost all the respondents (survey I: 95%; survey II: 98.9%) expected that the nurse would carry out necessary procedures (injections, dressings). In survey II, the respondents were significantly less likely to expect to be given information related to health and nursing care at the patient's home. However, they formulated their own expectations, such as kindness, sympathy, more smile, politeness – 0.7%, 'support' – 0.1%, systematic visits' – 0.1% and, help with the housework' – 0.1%.

Overall satisfaction with the family nursing care was measured on a five-point Likert scale (very satisfied, rather satisfied, difficult to say, rather dissatisfied, very dissatisfied).

Comparative analysis showed that in survey II, the percentage of respondents satisfied (very and rather) with nursing care increased from 38.5 to 53.6, the percentage of those who were neutral decreased from 59.7 to 45.8% and those dissatisfied (rather and very) decreased from 1.8 to 0.6% (Table 5). The differences between the surveys were statistically significant ($P < 0.05$).

Discussion

The surveys carried out at a 4-year interval revealed changes in patients' experience of the quality of family nursing. The two main criteria for evaluating quality in our study were patient satisfaction and number of home visits. We have shown that the percentage of the respondents satisfied with nursing care increased, and the percentage of dissatisfied respondents and those

	Survey I (n = 1000) (100%)	Survey II (n = 1000) (100%)
Expectations		
Carrying out necessary nursing procedures (injections, dressings, etc.)	950 (95.0)	989 (98.9)
Information about health (nutrition, coping with difficult situations, prevention of diseases)	720 (72.0)	558 (55.8)
Nursing care at home	805 (80.5)	307 (30.7)
Other expectations	4 (0.4)	21 (2.1)

Table 4 Patients' expectations of the nurse

Table 5 Satisfaction with a nurse

Satisfaction	Survey I (<i>n</i> = 1000) (100%)	Survey II (<i>n</i> = 1000) (100%)
Very satisfied	186 (18.6)	193 (19.3)
Rather satisfied	199 (19.9)	343 (34.3)
Difficult to say	597 (59.7)	458 (45.8)
Rather dissatisfied	17 (1.7)	6 (0.6)
Very dissatisfied	1 (0.1)	0 (0.0)

P < 0.0001.

who were neutral decreased. Patients' opinion on the care received is considered a key outcome in quality of care evaluation.³

We are aware that satisfaction measurement has certain limitations. Despite widespread use of satisfaction surveys, there have been growing doubts about the appropriateness of the concept to understand how patients evaluate their care. In addition, their usefulness in generating change in health services provision has been questioned.⁴⁻⁶ Some authors have suggested that satisfaction surveys actually measure patients' reluctance to criticize rather than a valid measure of their satisfaction.⁷ In our study we compared the level of satisfaction with family nursing services in two large samples from the same population. Such an approach (i.e. using the same tool in two random samples from the same population) increased the probability that the observed changes in satisfaction scores are the result of external factors and reflect improvements over time in the quality of family nursing services.

In study II, the percentage of home visits increased significantly across all age groups, except for those aged 75 and older. Our earlier studies indicated that more frequent home visits by a family nurse and/or midwife had a beneficial effect on patient satisfaction.⁸ Insufficient visits are one of the major factors responsible for patient dissatisfaction with home care.⁹ It should be noted that home visits by a family nurse could take place as a result of a physician's order or at the nurse's own initiative. Visits ordered by a physician are connected with minor procedures, e.g. injections, but independent vis-

its by nurses take place to discuss health problems or to provide medical counselling. A considerable increase in the number of home visits by a nurse in order to carry out minor procedures at patient's home (survey II) is associated with the fact that more procedures were ordered by the family physicians to be performed at home. Additional investigations are required to elucidate the reason for this change. It should be remembered that during survey II, nurses had their own practice and were responsible for their own equipment, while in survey I, they were employed by family physicians and all expenditures were covered by their employers.

In survey II, nurses visited patients significantly more often to discuss health problems or provide medical counselling. Nurses employed by family physicians (survey I) might not have been motivated to visit their patients to check for problems. The implementation of nursing service contracts is associated with greater professional independence, better time management and increased responsibility for the tasks performed. Moreover, as indicated by other authors, patients are more satisfied with medical care provided by independent practitioners with greater autonomy.¹⁰

The changes observed between survey I and II in patient expectations may be the result of their experience of receiving nursing care during the 4-year observation. The number of patients visited at home by a nurse increased (from 163 patients in survey I to 458 in survey II). As reported by Kravitz,¹¹ patients' expectations expressed before a visit can be modified during it. The nurse's visit may have influenced patients' perceptions of the nurse's role and their expectations. Additionally, some of the expectations expressed by patients independently, e.g. help with housework indicate a lack of knowledge of the role and responsibilities of the family nurse.

Nurses play an important role in the primary health care system. They can co-ordinate care of patients with chronic diseases^{12,13} and refer patients to a physician if necessary.¹³ Through the effective use of nursing skills, the number of

primary health care doctors, and thus costs, can be reduced.¹³ An increase in patients' access to nursing services in primary health care may ensure a higher level of patient satisfaction and better quality of medical care.¹⁴

In the present study, satisfaction with the family nurses' work, and number and purpose of home visits by nurses were adopted as measures of the quality of family nurses' work. Nursing care offered by independent nurses was available to a greater number of patients in the second survey, ensuring more efficient use of nursing services and higher satisfaction scores. However, the study outcome does not reflect a complete assessment of nursing care by patients. There is a need to assess patients' expectations of the family nurse more thoroughly. The questionnaires used in the present study should be supplemented with a qualitative investigation.

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