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Original Study

Assessment of Care Problems in Romania: Feasibility and Exploration

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A B S T R A C T

Objectives: The objective of this study was to study the feasibility of a recently developed instrument, LPZ-International, which assesses care problems in health care, and to describe the prevalence of care problems in Romanian health care institutions. Large differences exist in care services in Europe. Data on quality of care are absent or incomplete in Central-Eastern European countries. These countries, including Romania, have faced dramatic socioeconomic changes, which led to negative changes in quality of care.
Design: Cross-sectional study.
Setting: Hospital wards, mental care institutions, and nursing homes.
Participants: Nine health care institutions and admitted 394 patients.
Measures: LPZ-International was introduced in 9 health care institutions in Romania. Assessed care problems included pressure ulcers, urinary and fecal incontinence, malnutrition, falls, and physical restraints. The data were collected between November 2013 and March 2014. Two health care professionals completed the questionnaire by hand at the patient's site.
Results: Six of the 9 health care institutions and 90% of the patients participated, which indicates the feasibility of LPZ-International, as did the completeness of the questionnaire. The data showed a high consistency and only a few were missing. The most frequent care problem was urinary and fecal incontinence, especially in the nursing home. Pressure ulcers and malnutrition were less frequent care problems in Romanian patients. Physical restraints were frequently applied in the nursing home and geriatrics and oncology wards.
Conclusions: LPZ-International is a feasible instrument to assess care problems. The differences between wards and countries in the prevalence of care problems indicate differences in quality of care and the need for high-quality, comparative research.

Health care is directed to prevent health problems, to cure these when they occur, and to stimulate recovery and participation into normal living. However, care problems also may occur when patients are treated and cared for within the health care system. Older patients and patients staying for a longer time in health care institutions have an advanced risk for "secondary care problems" and

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comorbidities. These "care problems" include, among others, pressure ulcers, malnutrition, urinary and fecal incontinence, falls, and use of restraints.[1,2] Care problems do not only delay the recovery process, they also affect the quality of life and autonomy of patients and cause rising health care costs.[3–5]

The prevalence of such care problems is internationally used as an indicator for quality of care using a variety of instruments.[6,7] Most important are the absence of conceptual ambiguity and reliable and valid measures for professionals, patients, and providers.[8] If so, the prevalence of care problems may be comparable between different institutions and between different health care systems. One of these registration systems to assess the prevalence and related quality indicators of problems in different health settings is the National Prevalence Measurement of Care Problems (LPZ-International), developed and tested in various countries within different health care systems.[1,9] Also, LPZ-International allows participating institutions to benchmark their outcomes with the results of similar institutions.[2]

The growing number of dependent older people in Europe will put new and complex demands on the health services in European countries to maintain adequate quantity and quality of health care services.

The prevalence of basic care problems is often considered to be a parameter of basic quality of care. Care problems may threaten especially the autonomy of (older) patients and cause additional disabilities and adverse side effects, as in the case of physical constraints.[8]

Within Europe, large differences exist in care services; types of health care institutions; their availability; and their structure, expertise, and technical equipment. Systematic, national registration of health care facilities and activities are often incomplete in Central-Eastern European (CEE) countries and data on quality of care are scarce. CEE countries, including Romania, have faced dramatic socioeconomic changes that negatively affected the health status of the population.[10]

The Romanian context is interesting for various reasons. The centralized, completely state-controlled and -owned health care system has been transformed into a health insurance system. Privatization and copayment have been introduced, as well as a minimum package of services.[11] The state budget for health care has decreased several times, and hospitals have a shortage of personnel and resources.

Also, Romania has entered a dramatic demographic change.[12] In the coming decades, the number of people aged 65 years and older will increase by 5.4%, while at the same time the total population will decrease by 3.1%.[13] In addition, long-term care facilities are largely lacking, which puts pressure on families to take care of dependent family members at home on the one hand and on hospitals, where patients have to stay much longer after treatment if they cannot be taken care of sufficiently at home.

The aims of this study were twofold: to analyze the feasibility of the LPZ instrument in secondary and tertiary institutionalized health care on the one hand and to describe the prevalence of care problems, as indication of quality of care in these institutions, based on this instrument, on the other hand.

Methods

This study used the methodology of LPZ-International in a cross-cultural study design. LPZ-International has been applied in different health care sectors (hospitals, care homes, home care) and in different countries (the Netherlands, Austria, Switzerland, and New Zealand).[9] LPZ-International assesses structural/organizational characteristics at institutional and ward levels, and patients' characteristics (age, gender, diagnosis), as well as actual care problems, including the related preventive measures and treatment. In institutions that agree to participate, a coordinator is appointed and trained to supervise the execution of the study and to train the caregivers who perform the data collection. Information of each patient is assessed by 2 health care professionals, one of whom is working on the patient's ward and the other is not.

The following care problems were assessed following the LPZ-International protocol.[9] Pressure ulcers: Each patient was examined at bedside for the possible presence, location, and grade (I–IV) of pressure ulcer wound(s) at the day of the measurement; in addition, it was explored where and when these wounds had occurred. Incontinence: Urinary incontinence was defined as any form of involuntary urine loss; fecal incontinence as involuntary loss from the bowels for 3 to 4 times a month.

Malnutrition: Body mass index was calculated by recording weight and height. Also unintended weight loss and reduced food intake were recorded. Falls: A fall was defined as an unintentional change of position that results in a person coming to rest on the ground or other lower level. The prevalence was calculated as having fallen 1 or more times during the past 30 days, as reported by the patient or responsible nurse and/or from the patient file. Restraints: Use of physical restraints involves interventions, such as bed rails, bed-straps, nursing blankets, deep chairs, and chair tables, to prevent dangerous or risky situations. The frequency and type of restraints used in the past 30 days were assessed from the patient's file.

The questionnaires of LPZ-International have been translated from English into Romanian (forward–backward) by professional translators. The study design and protocol were approved by the Medical Ethical Committee of the University Titu Maiorescu in Romania.

A pilot study was executed in 2 wards of a general hospital, using the questionnaires. The experiences during the pilot showed that some concepts needed another word than used by the translators. The pilot also showed that the questionnaires were well received by the care professionals and could be used in practice.

The feasibility is assessed by the number of institutions and patients who are willing to participate, as well as through the completeness and consistency of the data (ie, which questions are not filled in and are there contradictory data).

In Romania, secondary and tertiary health care is delivered by a network of public or privately owned hospitals, centers of diagnosis and treatment, centers for care, and office-based specialists.[14] The services are delivered by publicly or privately working physicians. The following categories of institutionalized health care are distinguished: academic hospitals, district hospitals, municipal hospitals, and specialized units for tertiary care (including mental institutions and nursing homes). Two institutions of each category were contacted, based on the available network of the Romanian researchers. In the case of specialized units for tertiary care, 1 mental care institution and 2 nursing homes were contacted. In total, 9 institutions were contacted. These institutions were spread over cities and towns in Romania.

After explaining the objectives of the study, a proposal was made for the wards to be included in the study. Next, a formal invitation letter was sent to ask for participation in the study by the University Titu Maiorescu in Romania.

The data were collected between November 2013 and March 2014. Two health care professionals filled in the patient's data by hand at the patient's site, as prescribed in the LPZ-International protocol.

The data were stored in SPSS 20.0 (IBM SPSS Statistics, IBM Corporation, Chicago, IL) database and analyzed. In the discussion section, the prevalence of care problems in Romania is compared with international available data.

Table 1
Number of Approached Institutions, Participating Institutions and Wards, and Number of (Non) Participating Patients

Type and No. of Institutions Approached	Participating Institutions	Wards	No. of Participating Patients	No. of Nonparticipating Patients
2 Academic hospitals	1	Geriatrics	26	0
2 District hospitals	2	Cardiology	33	18
		Chronic diseases	20	0
		Geriatrics	15	0
		Hematology	8	0
		Internal medicine	41	1
		Oncology (2)	67	5
		Surgery	47	13
2 Municipality hospitals	1	Internal medicine	35	0
2 Nursing homes (1 private, 1 municipality owned)	1 (private)	All	32	1
1 Mental institution	1	Adults	31	1
Total 9 institutions	6	12	355	39

Results

Response and Feasibility

Three of the 9 approached institutions decided not to cooperate in the study after the objectives were explained. The reasons were no time/manpower for participation, no necessity to participate, and inadequacy of received information. Six institutions participated with in total 12 wards, including 394 participating patients (see Table 1).

In total, 39 patients refused to participate in the study, especially patients from the most acute wards (surgery and cardiology). The bad condition of the patient was often given as reason for nonparticipation.

In addition to the finding that 6 of the 9 approached health care institutions and 90% of the patients did participate, inspection of the completed questionnaires showed a high consistency and only a few missing data. Some questions were asked twice through the questionnaire (urine incontinence and falls) and the answers were the same. The coordinators reported a positive attitude of patients and health care professionals toward the measurement. The average time to fill in the questionnaire was 10 minutes.

Patients

Data on the prevalence of care problems are analyzed for 355 patients and presented per type of ward (see Table 2). The mean age of the patients was 67 years. Patients from the nursing home had the highest mean age (81 years) and they stayed on average 495 days in the nursing home. The mean age of the patients of the mental institution was the lowest (53 years) and their average stay was 75 days.

Care Problems

The most frequent care problem was incontinence for urine (15.8% of all patients) followed by incontinence for feces (14.6% of all patients). Incontinence for urine and feces was "common" in nursing home patients (28 [80%] and 25 [78%] patients, respectively). Incontinence for urine was relatively frequent for patients on wards for chronic diseases and geriatrics (30% and 22%, respectively), whereas incontinence for feces was relatively frequent in the mental institution (35.5%).

Pressure ulcers and malnutrition were the less frequent care problems in Romanian institutionalized patients (7 and 9, respectively, of 355 patients). Falls were experienced by 21 patients during their stay in the institution or, when they stayed long, during the last 30 days. Falls were relatively often reported on the wards of internal medicine (9 cases) and geriatrics (7 cases). Physical restraints were applied in 35 patients. Restraints were frequently applied to nursing home patients (20 (62.2%) of 32), but also in 10% of the cases in geriatrics and oncology wards.

Discussion

This study showed that the LPZ-International questionnaire to assess care problems is a feasible instrument to be used in the Romanian context. The cooperation of patients was excellent, and health care institutions as well as the Ministry of Health have shown their interest to apply such an instrument on a national base. This may be seen as an important stimulus to implement evidence-based practices in health care settings.[15] However, a Web-based version will be needed to implement the instrument on a large scale. Through a Web-based system, data can be stored and analyzed in a national database and be used as a benchmark.[7,9]

The prevalence of some care problems in Romania may be remarkable as compared with studies from other countries. Pressure ulcers were reported in 1.9% of all cases. A Dutch national prevalence study showed a prevalence of 9.8% in general hospitals and of 5.3% in institutions for chronic care.[16] In Romania, 3 cases of pressure ulcer were identified in a nursing home, but none in a mental institution or in a ward for chronic diseases.

Also, the prevalence of falls (5.9%) and malnutrition (2.5%) are (much) lower in Romanian health care institutions as compared with those in Austria, the Netherlands, and New Zealand. The prevalence of falls in these 3 countries varied between 14.4% and 18.4% in general

Table 2
Characteristics and Prevalence of Care Problems of Participating Patients per Ward

Ward	Mean Age	Mean Days on Ward	Pressure Ulcer	Incontinent Urine	Incontinent Feces	Malnutrition	Falls, 30 d	Physical Restraints, 30 d	Total Patients
Cardiology	64	4	0	0	1	0	0	0	33
Geriatrics	79	17	1	9	2	2	7	4	41
Hematology	66	6	0	1	0	0	0	0	8
Internal medicine	69	5	3	6	4	3	9	2	76
Oncology	65	10	0	4	6	4	2	6	67
Surgery	58	11	0	2	3	0	0	3	47
Chronic diseases	63	9	0	6	0	0	1	0	20
Nursing home	81	495	3	28	25	0	2	20	32
Mental institution	53	75	0	0	11	0	0	0	31
Total and % of total patients	67	219	7 1.9%	56 15.8%	52 14.6%	9 2.5%	21 5.9%	35 9.9%	355

hospitals and between 9.2% and 17.6% in institutions for chronic care; the comparative figures for malnutrition were between 21.8% and 32.9% in general hospitals and between 24.2% and 27.6% in institutions for chronic care.[16]

An explanation for this relatively low prevalence may be that most patients in Romania are mobilized during the daytime. This is also stimulated by families who visit the patients frequently and bring food and clothes. So, patients are often with family members, who also take care of them in the institution.

Incontinence for urine, on the other hand, is lower in the Netherlands as compared with Romania. The Dutch prevalence for urinary incontinence is 11.5% in general hospitals and 54.6% in institutions for chronic care. The Romanian data indicate that 80% of nursing home patients are incontinent for urine.

In Romania, physical restraints, especially bed rails, as in other countries, are frequently (62%) applied in nursing homes as compared with data from Austria, Canada, New Zealand, the Netherlands, and the United States.[8,16] However, neither bed rails nor other physical restraints prevent harm. On the contrary, they are related to adverse side effects, such as more frailty, more falls, and anxiety and panic attacks.[8] Therefore, it is recommended to look for alternative measures (sensitive and skilled supervision, adequate communication, floor mattresses).[8,16]

The discussed differences in prevalence outcomes may indicate that health care systems and health care professionals have their "strong" and "weak" points in taking care of patients. They underline the need for adequate research support to assess quality of care in health care settings in a valid and comparable way.[15] However, the interpretation of the mentioned comparative data is still worth discussing.

Besides some strong points (ie, the use of a validated LPZ-International instrument), the evidence about the feasibility of this instrument in Romania, and international comparison of care problems, the study had some weak points. The number of participating health care institutions was limited and they were not selected randomly. However, we were able to include different types of institutions and wards. Also the health care institutions were situated throughout the country, including large cities and small towns. Therefore, we believe that the study outcomes represent a first picture of the prevalence of care problems in Romanian health care institutions. Also, the results indicate the quality of care in these institutions.

The significant differences in the prevalence of care problems among countries shows the necessity to continue such comparative study on a larger level and repeatedly to understand which mechanism may explain such differences. Also, it underlines the necessity of support by national regulations and organizations as well as improvements in the management to stimulate evidence-based practices.[6,15] Additionally through such international studies, interventions may be designed to reduce the prevalence of care problems and to improve the quality of care.

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