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## Zachowania pielęgniarek/położnych środowiskowych i ich rodzin w sytuacji choroby

## Behaviors of registered community nurses and midwives and their families in case of illness – a pilot study

### Streszczenie

**Wstęp.** Pielęgniarki i położne środowiskowe pracują głównie w domach pacjentów, gdzie narażone są na wiele zagrożeń zawodowych. Niejednokrotnie w pracy zapadają na choroby, które następnie mogą być rozprzestrzeniane wśród ich krewnych, współpracowników i innych pacjentów, stąd od właściwego zachowania personelu pielęgniarskiego w przypadku zachorowania zależy zdrowie otoczenia.

**Cel.** Zadaniem niniejszej pracy było zbadanie zachowań polskich pielęgniarek/położnych środowiskowych i ich rodzin w sytuacji własnej choroby.

**Materiał i metody.** Badania przeprowadzono przy pomocy anonimowych ankiet na grupie średniego personelu medycznego z okolic Bychawy.

**Wyniki.** Zachowania pielęgniarek i położnych oraz ich bliskich w sytuacji choroby były bardzo zbliżone – polegały na korzystaniu z fachowej pomocy lekarza oraz stosowaniu farmakoterapii, niejednokrotnie jednak bez wykonywania zleconych badań i ścisłego przestrzegania zaleceń lekarskich. Częstym zjawiskiem było leczenie „na własną rękę”, przede wszystkim przy pomocy środków przeciwbólowych, przeciwzapalnych i witamin, ale również antybiotyków.

**Dyskusja.** Pielęgniarki i położne środowiskowe wraz z rodzinami nie zawsze zachowują się właściwie w sytuacji własnej choroby – nieraz nie stosują się do zaleceń lekarskich, na przykład nie wykonują koniecznych badań, a także zażywają leki (między innymi antybiotyki) bez zlecenia i nadzoru lekarza. Takie postępowanie może nie tylko utrudniać postawienie prawidłowej diagnozy i skuteczne leczenie, ale również mieć niekorzystne następstwa dla zdrowia całej populacji (powodować antybiotykooporność).

**Wnioski.** Wprowadzenie działań służących poprawie zachowania personelu medycznego w przypadku zachorowania, przede wszystkim w zakresie stosowania się do zaleceń lekarskich powinno stanowić ważne zadanie dla organizatorów służby zdrowia w Polsce.

### Abstract

**Introduction.** Community nurses and midwives who perform their work mainly in patients' houses are subjected to many occupational hazards that frequently may lead to a disease, which next can be spread to their relatives, coworkers or patients. Therefore, the proper behavior of nursing staff in case of their own disease can be important for health of their environment.

**Aim.** The present pilot study investigates the behavior of registered community nurses and midwives and their families in situation of illness.

**Material and methods.** The investigation was performed with the use of anonymous questionnaires among the nursing staff in Bychawa region (Poland).

**Results.** Behavior of community nurses and midwives and their relatives in case of their illness was similar – it included visiting a doctor and the use of pharmacotherapy, however sometimes without following all doctor's orders and doing necessary check-ups. Frequent behavior was the use of OTC, first of all painkillers, vitamins and antipyretics but at times antibiotics as well.

**Discussion.** Community nurses and midwives and their families sometimes do not behave properly in case of own disease – they sometimes do not follow the physician's orders, for instance they do not undergo necessary check-ups and use drugs for self medication, among them antibiotics without necessary doctor's prescription and supervision. This can make more difficult their correct diagnosis and treatment and may also have negative consequences on the public health, e.g. it can cause resistance to antibiotics.

**Conclusions.** The introduction of measures to improve the behavior of medical personnel in the event of illness, especially in the use of the doctor's recommendations is an important task for the organizers of health care in Poland.

**Słowa kluczowe:** pielęgniarki/położne środowiskowe, choroba, stosowanie się do zaleceń, samoleczenie.

**Keywords:** registered community nurses/midwives, illness, compliance, self-treatment.

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## INTRODUCTION

A disease, which is an abnormal condition often associated with specific symptoms and signs may afflict anyone; however there are some occupational groups that could be seen as particularly endangered by health risk, for example professionals of the health care sector [1-6]. Of all the health care providers, nurses and midwives spend most of the time with patients on collecting data, doing physical inspections, designing nutritional plans, giving medications and treatments instructed by doctors. They additionally act as patient advocates [7] and educators on diseases and conditions, provide emotional support to patients' families and offer health care instructions and counseling in the community.

Nursing staff usually perform their duties in hospitals and outpatients polyclinics, however there are community nurses and midwives whose workplace is located in the patients' place of residence and thus not inspected in terms of safety and hygiene [1]. The greatest hazards of their job are excessive physical load, forced position at work, aggressive patients or members of their families, dangerous domestic animals, low quality of technical devices in patients' homes [1] and great psycho emotional strain [8] often caused by permanent contact with patient's pain, suffering, emotions and cultural diversity [9]. Close contact by nursing staff with ill people and chemical substances, like antiseptics or treatment drugs, is linked with increased risk of contamination, allergies and different kind of diseases [2-5], sometimes the contagious ones. They can be next spread from medical staff to their family members and society. This situation is complicated by an already unsatisfactory system of medico-phylactic recommendations as result of poor knowledge on incidence of hazard factors in their work environment [3].

As far as we know, there have not been previous studies, which have dealt with the problem of behavior of registered community nurses and midwives and their relatives in situation of illness.

## AIM

In this pilot study we aim to answer who do the community nurses and midwives and their family members contact with in case of illness; if a doctor – do they follow his/her orders for example undergoing diagnostic examinations? What methods of treatment do they use? Do they take – OTC drugs; and if any – what kind of drugs? We also try to answer on the basis of the literature, whether such behavior could have any implications on public health.

## MATERIAL AND METHODS

The investigated group consisted of 108 randomly recruited registered community nurses and midwives employed in the Lublin region (Poland). Specially designed anonymous surveys were divided into two parts. The first part consisted of 7 socio-economic questions. It allowed for the classification of respondents with regard to their age, education, marital status, the number of children, the place of residence, workplace, held position and work experience. Eight questions in the second part collected information about the behavior of nursing staff and their families in situation of disease (i.e. visiting doctors, taking sick leave, the use of different treatment methods). Most of the questions were multiple-choice and close ended, which eliminated the ambiguous answers. Statistical calculation was conducted using a Chi-square test of homogeneity with Yates correction (if necessary) and two fractions test.

**TABLE 1. Behavior of nurses/midwives and their families in case of illness.**

	Nurses/midwives			Families			p
	Always	Some-times	Never	always	Some-times	Never	
Visiting							
General practitioner	64	32	4	65	36	1	0.1312
Specialist doctor	35	55	10	33	50	17	0.5685
Herbalist	0	6	94	2	7	91	0.5913
Physiotherapist	1	18	81	0	14	86	0.4461
Biotherapist	0	4	96	0	5	95	0.7330
Chiropractor	0	1	99	0	1	99	1
Faith healer	0	0	100	0	0	100	1
Following all of physician's orders	32	53	15	38	44	18	0.4444
Undergoing check-ups for diagnosis	60	29	11	55	32	15	0.6186
The using of:							
Pharmacotherapy	66	34	0	64	36	0	0.9566
Herbal therapy	19	51	30	17	44	39	0.5300
Physiotherapy	2	26	72	2	23	76	0.6700
Aromatherapy	0	6	94	0	4	96	0.7564
Hydrotherapy	2	3	95	3	1	96	0.7330
Climate therapy	6	7	88	5	9	86	0.8408
Phototherapy	1	3	97	0	1	99	0.3650
Biotherapy	0	5	95	0	6	94	0.7564

## RESULTS

### Socio-demographics

The majority of the medical staff participating in the study had extensive professional experience, with 85% having worked at least 5 years in their occupation. Half of the respondents had been working between 10 and 20 years; and 27% more than 20 years. All the surveyed women had proper medical education; most of them had graduated from vocational high schools and 9% from universities. Eighty four percent of respondents were married and 16% were single; 86% declared having children.

### Behavior in case of disease

The most popular contact person for nurses/midwives and their relatives in case of sickness was a general practitioner or a specialist (Table 1); only a minority contacted a herbalist, physiotherapist or biotherapist; no one visited a faith healer. All doctors' orders were always followed by one third of nursing personnel and by four out of ten of their relatives, but were ignored by every sixth nurse/midwife and their family members.

When ill, more than half of the respondents and similar number of their relatives underwent necessary diagnostic examinations; one third did it only sometimes, while a dozen of them did not undertake any necessary diagnostic examinations at all. In case of illness two in three surveyed nurses/midwives and members of their families used pharmacotherapy to recover, whilst one in five – the herbal therapy; methods like physiotherapy, aromatherapy, hydrotherapy and others were much less popular. The most popular OTC drugs were painkillers, vitamins and antipyretics (Table 2), however painkillers were significantly more often taken by nurses/midwives ( $p < 0.01$ ).

## DISCUSSION

Community nurses and midwives are involved in specific areas of care [9], which are pursued in the closest and permanent contact with people, mainly in their homes [1]. Lately there has been a decrease in the incidence of contagious diseases apart from hepatitis C among health and social workers in Poland [4]. It should be noted that nursing staff, irrespective of their workplace, are exposed to numerous hazards. Amongst them contagious air/blood borne or parasitic diseases [2,4,5], skeletal system injuries [6] caused by patients' lifting, moving, handling and securing and compact treatment spaces. Additionally, they are exposed to haz-

ardous chemicals (disinfectants and sterilants, carcinogenic materials, flammable liquids, materials used to make gloves) and workplace violence, beyond physical attacks. In addition, the job stress and chronic tiredness, which they are subjected to, may increase the risk of cardiovascular and gastrointestinal diseases, psychological disorders and other health problems.

During the illness, most people isolate themselves, slow down the pace of living, sleep more, exclude stimulants and nicotine, change their diet – for example they take light products and vitamins, and drink more fluids. They sometimes start using traditional treatment methods like herbal brews, inhalations and ointments; if these actions are not effective they visit a physician. The majority of nurses and midwives who took part in the present study as well as members of their families in case of illness contacted a general practitioner or specialist doctor and no one used the assistance of faith-healer, which was consistent with a view presented in the formal medicine. GPs were two times more frequently visited than specialists probably due to the specifics of health care organization in Poland, i.e. it is necessary to receive a referral from the family doctor to a specialist; only a visit to gynecologist, dentist, ophthalmologist or psychiatrist does not require that procedure. Visiting the physician did not always mean following doctors' orders, i.e. undergoing diagnostic examinations, what could be surprising, because the majority of such check-ups are free of charge; moreover they often help in correct diagnosis. Additionally, the surveyed medical staff and their relatives used OTC drugs for self-treatment, among them vitamins, painkillers, and antipyretics. Unfortunately, medications of the last two groups could suppress the symptoms of potentially severe diseases. The use of painkillers might be explained by headaches or musculoskeletal problems, which have been reported as the most common type of nonfatal injuries in nursing personnel, also in many young nurses [6] while on the job.

However, the popularity of self medication with anti-inflammatory drugs and antibiotics among the surveyed medical staff and their family members could be highly worrying; it did not differ greatly from the average worldwide non adherence estimated in meta-analysis in almost 600 studies as 24.8% [10] and among ambulatory patients even as 40% [11]. Non-compliance with doctors orders during the medical treatment is commonly known but a poorly predicted phenomenon [12] which is the highest in case of multiple and long lasting dosing of several pills within chronic diseases [10]. It does not relate to socioeconomic status, educational level, gender, race, and severity of illness, medication side effects, or the patients' understanding of the disease [12]. There is a wide spectrum of non-adherent behavior, from outright refusal to take prescribed medication through failure to complete therapy in case of better feeling or occasional skipping doses [13] to taking OTC drugs for self-cure. Self-medication practice increases when medications, among them also antibiotics from previous therapy, are often stored at home for anticipated illness in future [14]. Non-compliance with antibiotic therapy can lead to development of resistant bacteria strains and therefore poses a risk not only to individual patients but also to the general population [15]. Unfortunately, doctors excessively prescribe

**TABLE 2. Over-the-counter drugs used by nurses/midwives and their relatives in case of illness.**

Medications	Nurses/midwives	Relatives	p
Vitamins	93	90	0.4478
Painkillers	96	85	0.0086
Antipyretics	83	84	0.8491
Anti-inflammatory drugs	37	26	0.0956
Antibiotics	22	12	0.0612
Tranquilizers	9	6	0.4216
Sleeping pills	5	1	0.0989

antibiotics and use them in minor infections, whilst pharmacists sell them over the counter. This may have ramifications on growth of direct and indirect therapy cost, treatment failure [10,12] recovery time and increased return visits to the physician [16].

Notwithstanding that unhealthy lifestyle and patients non-compliance is a global problem, there is no doubt that community nurses and midwives as representatives of medical service should not only be leaders in the area of health promotion but also set a good personal example to the society. Skilled and experienced medical personnel should live a well-balanced life, which includes proper nutrition and attitude toward obesity, physical activity, emotional and spiritual well-being, effective coping with stress [8] and smoking cessation. Also they should know how to use proper techniques for dealing with job-originating diseases by undergoing seasonal vaccinations, wearing medical masks [5] and gloves, avoiding skin damage, frequently washing hands, investing in good, comfortable footwear, preventing musculoskeletal injuries by preparing muscles and tendons to physical tasks and using force in a proper way. Making their patients' health a priority, they should not neglect their own health for the sake of others.

Authors of the present paper hope that health care managers will actively promote changes in the work environment of registered community nurses and midwives as well as will support advanced continuous education in pre- and post exposure prophylaxis addressed to nursing staff. It is also necessary to introduce sufficient public health education through national prudent use campaigns on the proper behavior in case of disease. First of all, there should be activities leading to the enhancement of compliance i.e. proper use of medications, especially antibiotics [15]. Control over pharmaceutical promotion, more attention to consumers and patients as the ultimate users of drugs [14] and strictly following the guidelines, may also limit re-use of leftover medications and decrease the risk connected with patients' self-medication.

## CONCLUSIONS

The main findings of the study were:

1. Community nurses/midwives and their relatives in case of illness contacted a general practitioner or specialist, however a part of them disobeyed doctor's orders, for instance did not undergo necessary diagnostic examinations.
2. Nursing staff and their family members had less confidence in alternative medicine and put more trust in pharmacotherapy; unfortunately, their self-medication with OTC drugs, among them antibiotics, which were taken without doctors' prescription and supervision, might not only cause problems with their recovery but also have long-lasting negative consequences for health of the general population.
3. In order to protect health of future generations the health organizers in Poland should put more stress on education of nurses and midwives and to introduce national educational campaigns about proper behavior in case of illness.

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