PERMANENT MEDICAL CENTERS – PREMISES FOR INCREASING ACCESSIBILITY TO HEALTH SERVICES IN RURAL COMMUNITIES (IASI COUNTY)

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Simona-Andreea Ursache (m. Dumitriu)[1]
Ionel Muntele[1],[2]
Marinela Istrate[1]
Mihaela Orlanda Antonovici (Munteanu)[1]
[1]„Alexandru Ioan Cuza" University of Iasi, Faculty of Geography and Geology, Department of Geography, Bd. Carol I, 20 A, 700505, Iasi, **Romania**.
[2] Romanian Academia, Bulevardul Carol I Nr. 8, 700505, Iasi, **Romania**.

ABSTRACT

In Romania, rural areas are deficient in terms of health coverage compared to urban areas, which directly affects the health status of the rural population and indirectly the social, economic and sustainable development situation of the country. The decentralized Romanian health system is part of the Eastern European countries' patterns, facing worrying problems which require real and rapid solutions to reform and modernize the health system.The purpose of this work is to analyze the accessibility of the rural population in Iasi county to primary medical care through permanent centers, medical units, which operate outside the normal working hours of individual medical offices and are served by family doctors, who are mainly providing treatment of minor emergencies. From a methodological point of view, the study is based on descriptive and comparative analysis of general data provided by the National Institute of Statistics and secondary data obtained from doctors' questionnaires from 14 permanent centers in rural Iasi County. The centers provide information about the annual number of patients, the age and the predominant sex, the medical services most often performed, the diseases that patients suffer from most often, the way in which the SARS-CoV-2 pandemic 19 influenced the number of interventions etc. The final results will outline the importance of permanent centers in rural areas, the accessibility of the population to urban centers of emergency mayors, the population they serve and their efficiency within the Ministry of Health. The European Union through cohesion policy and non-reimbursable European funds supports health policies in our country to ensure better quality emergency health care in rural Romania as well.

Keywords: Health services, accessibility, rural areas, public health policies

INTRODUCTION

The state of health of a population directly influences the quality of life of the individual and of society as a whole. The World Health Organization, the United Nations or the European Union are just a few of the major organizations that recognize the right to health as a fundamental human right, with everyone having the right to access preventive healthcare, Specialized medical care, and a high level of human health protection (Charter of Fundamental Rights of the European Union, Article 35 – Health protection).

In 1978, in the International Conference on primary Health Care, Alma-ATA, USSR, 6-12 September, the Alma ATA Declaration was signed, which laid the foundations for medical care worldwide, being the first time in history that the countries of the world take on the unanimous responsibility for ensuring equitable access to health services, including services for the prevention and treatment of non-communicable and infectious diseases or mother and child health. Although efforts by all countries have been significant, progress in the coming years has further exacerbated inequalities, with a large part of the world's population not having access to basic primary care, mother or child care [1].
The United Nations (from 2015) approved by 2030 a comprehensive framework of action comprising several sustainable development objectives, including ensuring a healthy life and promoting well-being for all at all ages. This objective concerns public health policies focusing on the reduction of infectious diseases (HIV/AIDS, tuberculosis, hepatitis), non-communicable diseases and mental health, abuse of prohibited substances, tobacco control, access to vaccines and medicines, health financing and labor-related issues in this area. The state of health of the population is influenced by both genetic factors, environmental factors, economic or socio-cultural factors and access to health services, determined in particular by the convergence of supply and demand for healthcare.
There are significant differences worldwide between the urban population, with easy access to emergency and specialized medical services, and the rural population, which has access to primary care at most. The World Health Organization considers primary assistance „includes physical, mental and social well-being and it is people-centred rather than disease-centred (PHC is a whole-of-society approach that includes health promotion, disease prevention, treatment, rehabilitation and palliative care) and comprises three components: meeting people's health needs throughout their lives; addressing the broader determinants of health through multisectoral policy and action; and empowering individuals, families and communities to take charge of their own health [2]. There are views that „primary health care combines accessibility to the health care system; accountability to offercare that meets comprehensive health needs; coordinated and integrated care that involves illness prevention, focused care, and the treatment of chronic illness and mental health issues; and the creation of enduring relationships among providers, patients, and the broader community"[3].
In Europa „although varying greatly from country to country, rural−urban differences may be seen in areas including, but not limited to, the following: presence of qualified health care workers, distance to major hospitals, access to specialized services, access to health promotion and prevention activities, availability of pharmacies and essential medicines, financial barriers to health services, effectiveness of emergency care services, quality of the infrastructure, including equipment conditions in hospitals and demands on health workers"[4]. In Romania, rural-urban disparities are increasing, on the one hand because of the lack of medical infrastructure, with the population having no access to primary medical services (mainly provided by permanent medical centers, dispensaries, family doctors' offices or even pharmacies), on the other hand, because of the lack of a qualified human resource, there are no policies to attract doctors to rural areas, which are often disadvantaged or an aging population for which palliative care is essential. In our country primary care, especially in rural areas, is provided by permanent medical centers, where the continuity of primary care on-call is ensured for patients in the area rounded to the center, on duty.
The research area of the study is the Iasi county, located in the North-East region of Romania, a major medical and university center.

H1: The work of permanent centers is essential in rural areas as it ensures that basic medical services are accessible to the public, including the treatment of minor emergencies.
H2: Permanent centers are a viable long-term solution for overloading urban emergency medical services.

CONCEPTUAL AND METHODOLOGICAL FRAMEWORK

From a methodological point of view, in this study, we intend to analyse the importance of permanent centers in Iasi county in terms of the accessibility of the rural population to the primary medical services provided by the family doctors. We will analyse the evolution of the medical staff in Iasi county and the accessibility of the rural population to permanent centers. We will use both objective/quantitative (analysis of the statistical data provided by the National Institute of Statistics) and subjective/qualitative research methods using the questionnaire method. Thus we will implement a questionnaire to be addressed to the on-call doctors at the 14 permanent centers in the rural areas of Iasi county with which we will find out information on the annual number of patients, the age of patients, the diseases prevailing in the local Community, the most frequently performed medical services, the way in which the SARS-Cov2 pandemic led to increased or decreased interventions, etc. We will also analyse information on the geographical distance traveled by patients to receive primary care services, the distribution of opportunities to access healthcare in the territory, identifying rural areas with special features in terms of clearly unequal access to healthcare facilities.
As regards the means and method of work, the study was conceived as a field survey (opinion), using the questionnaire as the main working tool, with several types of questions (open, closed, with only one choice of answer, etc.), sent between October 2020 and February 2021 both on place and through the telephone interview. Geographically, accessibility to health services is directly influenced by time-related accessibility (expressed in the real physical time patients can access the necessary health services, the optimal level being 30 minutes) and spatial accessibility, which represents "the proximity of healthcare providers to the population served, which can be quantified by the distance the patient has to travel to the healthcare facility in which the medical services he needs and he/she requires are provided [5]. A special feature is that the anisotropic characteristics of the area studied and the ability of the population to take advantage of the medical services in the proximity directly influence the quality and quantity of the services provided [6].

RESULTS

In our country permanent centers have been set up to serve primary medical services in particular small urban areas or rural areas in order to relieve congestion at hospital emergency facilities, financed by the national Single Health Insurance Fund. The family doctors' offices are working, with extended operating hours, between 15:00- 8:00 on working days and on a permanent weekend. According to the legislation governing their operation, medical services provided in permanent centers include: Medical care in acute diseases and medical-surgical emergencies, within the limits of the competence of the family doctor and technical possibilities, referral to other specialties for admission, administration of the medication required for emergency treatment, the issue of a medical certificate for the patient, with which he will present himself the next day to his family

doctor for prescription. Before the accession of our country to the European Union, between 2003-2007 we can notice that about half of the family doctors in Iasi county are professionals in Iasi city, a medical and university center much more bidder than the small towns or rural areas of the county, which lacks on medical infrastructure. After 2008, the rural-urban inequalities are further accentuated, more than 60% of the doctors in the county practicing in Iasi municipality (in 2010 - 468 out of 611, in 2011 - 586 out of 786), after 2011 the number of doctors in Iasi municipality will decrease steadily, Reaching even less than 30%, (2015- 135 out of 472, 2017- 174 out of 506), against the background of a general decrease in the number of family doctors in Iasi county (786 doctors) after 2011, the number of doctors in Iasi municipality will decrease steadily, reaching even lower rates than 30%, (2015- 135 out of 472, 2017- 174 out of 506), against the background of a general decrease in the number of family doctors in Iasi county (786 family doctors in 2011, (441) in 2018, with a slight increase in 2019 to 549 (see Fig. 1).

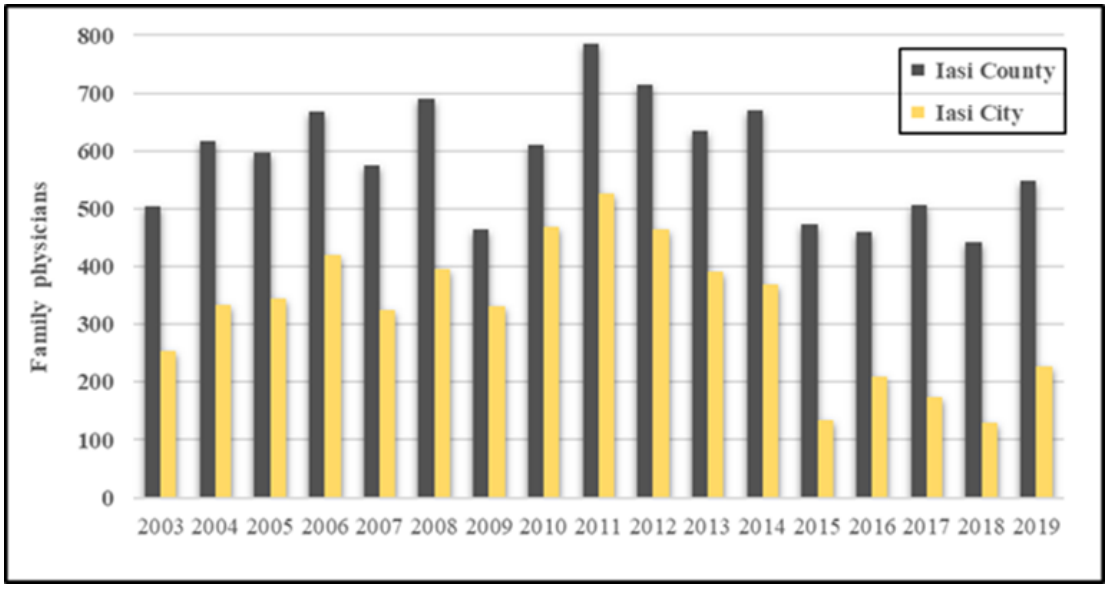

Figure 1. Evolution of the number of family doctors in Iasi county and municipality (2003-2019)
Source: National Institute of Statistics, Bucharest, 2003-2019

This aspect was most likely directly influenced by several factors: Due to the lack of human resources (After accession to the European Union, a large number of doctors have migrated to developed countries in Western Europe because they offer both real support for professional development through access to modern medical equipment and a significantly higher remuneration [7]), placement of medical schools in urban areas only (In the United States of America, attempts were made to attract family doctors through medical practice in rural areas and financial incentives), the geographical isolation of rural communities and the limitation of socio-economic resources (specific to rural communities around the world [8]), few opportunities for professional and personal development, including limitations for families of doctors, long distances to urban centers [9],access to education, food, cultural or religious goods or services have been identified as influential factors [10].

We also mention that there is an increasing number of family doctors every year at national level, with few resident doctors opting to specialize in this field. At the level of Iasi county from 2008 to 2019, 19 permanent centers were set up: 5 in the urban environment: Pascani (See fig. 2), Podu Iloaei and 3 in the municipality of Iasi and 14

centers in rural areas: Belcesti, Bivolari, Deleni, Ciurea, Ciortesti (See fig. 3), Focuri, Mircesti, Movileni, Plugari, Pocreaca-Schitul Duca, Prisacani, Vladeni, Voinesti, Victoria. We have taken into account, in the analysis of accessibility and urban centers, which also serve the population in rural areas around the world, but for the purpose of the survey we only asked the on-call doctors from the 14 rural permanent centers.

Figure 2. Medical permanence center in urban area ((Pascani city)

Figure 3. Medical permanence center in rural area (Ciortesti village)

The analysis of the questionnaire addressed to family doctors shows that in almost all permanent centers the annual number of patients is over 1100, with the exception of the center in Movileni (around 500 patients annually) and the fire and Prisacani centers (between 800-1100). As regards the age and gender of patients, it is generally targeted at all age groups and both sexes, with slight particularities in the Plugari (35-39/ over 65 years old, prevalent female), Bivoli (50-64/ over 65 years old), seals (35-49 years old), Voinesti (under 18 years old, predominantly female) or Ciortesti (under 18/35-49, predominantly male). We can note that vulnerable groups of people (children and the elderly) are generally more frequently targeted at permanent centers, but in the case of minor emergencies and the working population (employees, co-insured persons or disadvantaged persons). Most patients in these centers suffer mainly from cardiovascular and respiratory diseases. The most common medical services are: consultations for acute respiratory and digestive disorders, trauma, injectable treatment and perfusions, dressings, treatment of febrile syndrome, treatments for polyarthrosis pain or other disorders of the skeletal system, regular consultations for children, treatment of renal and biliary colic, allergies and stings of insects (bees, ticks) or animal bites.

To the question "What kind of equipment would be useful in the activity of permanent centers to increase the addressability and efficiency of services in rural areas?", Some doctors stated that they currently have the necessary medical infrastructure (some equipment purchased from own funds): Ciortești, Vladeni, Victoria, Mircești, Belcesti, Focuri), in the case of some centers it would be important for a more correct diagnosis and equipment that is not in the obligatory grid of the permanence centers but which in some situations would ensure a higher addressability among vulnerable people and a significant relief of urban emergency departments: imaging equipment (Plugari), electrocardiograph (Ciurea, Deleni), otoscope, sphygmomanometers, defibrillator, aerosol device, secretion aspirator, oxygen (Deleni), biochemistry, ion analyzers (Bivolari, Movileni) or protective equipment, disinfectant, consumables and medicines pan half of Sars-Covid 19 generating a higher consumption of these equipments (Pocreaca, Voinești). At the end of February 2020, the first patient infected with the Sars-

Covid virus19 was confirmed in our country, and since March 2020, important measures have been taken to limit the movement of people. Despite all these efforts, the number of infections increased quite a lot in the summer months, culminating in the autumn months with thousands of infected and hundreds of deaths daily. This situation has further accentuated the rural-urban gaps in our country, the urban medical services being much more difficult to reach the rural population. In the case of permanent centers there are three different situations: centers that have felt the effects of the coronavirus pandemic by increasing the number of patients (Plugari, Pocreaca, Mircești, Victoria) or the number of phone calls in the context of providing consultations and treatment via mobile telephony (Ciurea), centers in which the number of patients decreased significantly during the pandemic, and as a result of restrictions imposed by the authorities (Deleni, Movileni) and centers that were not directly influenced by the effects of the pandemic (Belcești, Focuri, Prisacani, etc.). With the help of the ArcGis program (Network Analyst function) we made a map of the accessibility of the population of Iași county to the permanence centers (taking into account the optimal distance of 30 minutes relative to the road network and the maximum speed limit allowed in traffic).

We can see that there are several areas of influence: the western area served fairly judiciously by Pascani and Mircești permanent center, the northern area provided by 3 permanent centers (Deleni, Plugari and Bivolari), the central-eastern area served by the centers (Vlădeni, Movileni, Victoria, Focuri, Belcești and Podu Iloaei) and the south-eastern area of 3 other permanence centers (Pocreaca, Ciortești, Prisacani), (See fig. 4).

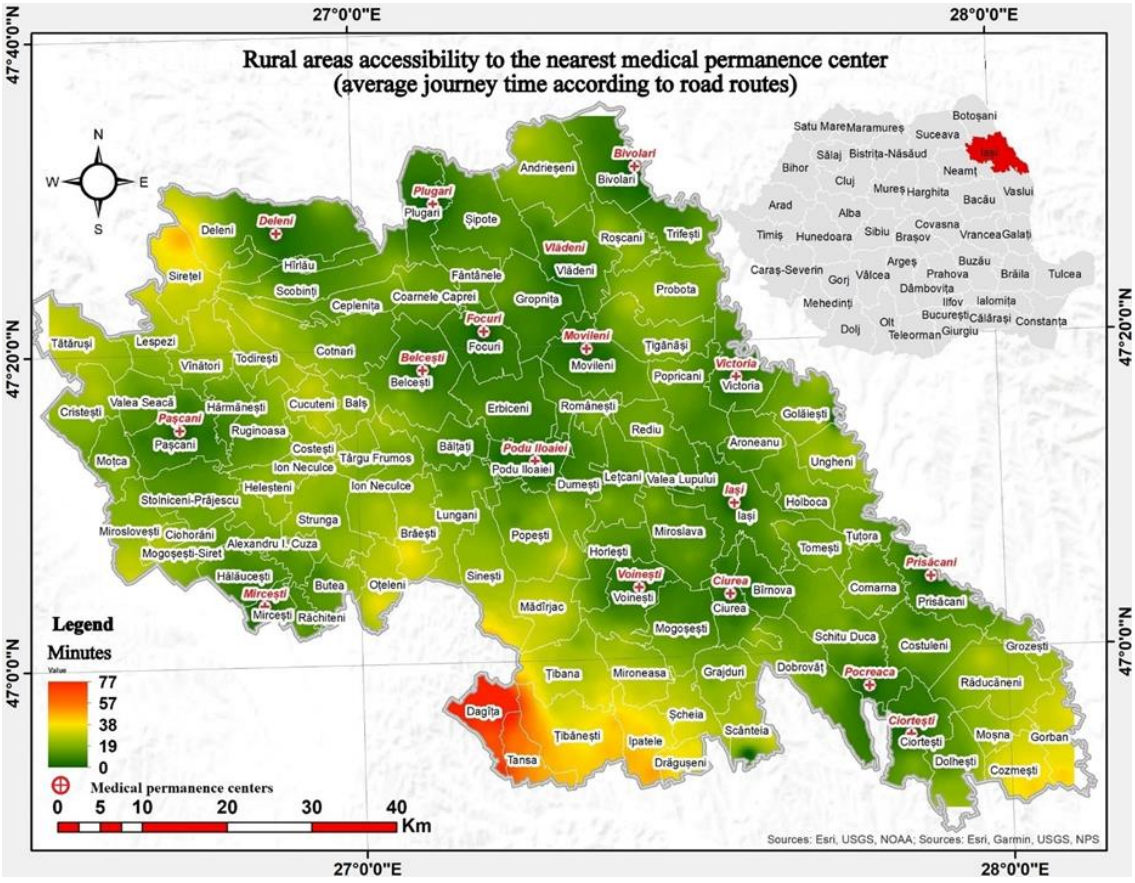

Figure 4. Rural areas accessibility to the nearest medical permanence center in Iasi County

A lower accessibility to the medical services offered by the permanent centers in the rural area seems to have the population from the peripheral communes near Vaslui county: Gorban, Cozmesti, Mosna, Draguseni, Ipatele, near Neamț county: Oțeleni, Braești or from the neighborhood (Sirețel, Deleni). The communes of Dagita, Tansa or Țibanești stand out with the lowest accessibility, the closest permanence center to them being the center from Voinești. The doctor on duty here mentioned to us that he often has to provide medicines at the center because most of the time patients do not have the opportunity to buy any medicines (they do not have a pharmacy nearby) and often come back. with more severe forms of the reported diseases because they do not have access to the prescribed medication. In the urban area of Iași, the metropolitan area of the municipality and the intermediate spaces Iași-Targu Frumos there is a high accessibility and an excellent coverage [6].

CONCLUSION

Primary health care is very important in rural areas because it is the patient's first contact with the health system and is often influenced by a number of factors: difficult geographical access, poor road/rail network, lack of transportation in common or even low standard of living and social status (in the case of Dagita, Madarjac, Țibana and Țibanesti communes important contribution of the Roma community) [11]. As a direct consequence, low accessibility to medical services often leads to postponement of medical care and often to aggravation of pre-existing diseases or late diagnosis, thus increasing the cost of medical interventions and often to premature mortality. As we could see, the permanent centers in the rural area of Iași county serve an important number of patients and also offer the chance for primary health care to the population at a considerable distance from the city of Iași, even if their distribution is somewhat uneven in the territory. This article only partially analyzes the accessibility of the rural population to the permanence centers, a complete analysis also requiring the analysis of the distance from the hospital-type medical centers, the share of young / elderly population, infant mortality, presence / absence of drinking water distribution networks, presence / absence vulnerable communities (Roma), the unemployment rate and the share of the employed population, the degree of education of the population, etc., and last but not least the questioning of the population regarding the degree of addressability and equity among permanent medical centers in rural areas.

Both at county and national level, political support for a series of initiatives to boost the provision of a better-prepared and supported health workforce in rural communities would be essential for sustaining rural health and rural education, very poorly developed in our country [12].

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