

# THE STATUS OF THE PRIMARY HEALTH CARE PLUS PILOT PROJECT IN POLAND

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A – study design, B – data collection, C – statistical analysis, D – interpretation of data, E – manuscript preparation, F – literature review, G – sourcing of funding

## ABSTRACT

**Background:** The National Health Fund (NHF) is the public payer solely accountable for securing and organizing access to health care services in Poland. The NHF is responsible for implementing a project entitled “Primary Health Care PLUS” which aims to introduce a primary care centered model, based on coordinated, proactive and preventive methods relevant to patients’ needs and furthermore, works to keep patients well-informed and active participants in health care decision-making. The implementation period of the project is July 1, 2018 through Dec. 31, 2021.

**Aim of the study:** The purpose of this study is to outline patient demographics and staff structures of providers that took part in the PHC PLUS pilot program, as well as the status of the program throughout the first year of its implementation.

**Material and methods:** Following an open and transparent recruitment process, 42 urban and rural primary health care providers were selected. The purpose of the providers’ geographic spread was to ensure the model was tested in all representative regions of the country.

**Results:** 42 PHC PLUS providers attending to 288,392 patients are participating in the project. Approximately 1,100 medical staff members are involved in the project. PHC PLUS medical teams consist of specialists including physicians, coordinators, nurses, dietitians, psychologists, physiotherapists and health educators. Out of 41,022 health risk assessments declared to be conducted during the project, 18,058 (43.1%) were performed from July 1, 2018 to April 30, 2019, including 4,537 basic and 13,521 extended assessments. Furthermore, 15,020 patients in total, participated in the disease management programs, which are also paid from the project.

**Conclusions:** A Polish health care pilot project that centers primary care can help shift the focus toward preventive interventions, rather than the current system, which often focuses on providing medical care to patients who have already been diagnosed with diseases, often in their more advanced stages.

**KEYWORDS:** Primary Health Care Plus project; health checkups, disease management programs

## BACKGROUND

Many countries that have worked towards providing universal health care for their citizens have experienced significant economic challenges, deriving from a number of sources. For example, greater patient longevity means health care providers are now treating more chronic diseases as patients have increased long-term health care needs [1]. The related expenses exceed economic growth even in the most developed countries. These challenges put pressure on providers to find ways of improving health outcomes for patients without incurring additional costs. Therefore, many countries are looking for more effective ways of deliv-

ering high-quality health care services. The coordination of health care systems and better distribution of tasks between medical and non-medical personnel are expected to lead to both financial savings and improved quality of services [2].

The National Health Fund (NHF; Polish: Narodowy Fundusz Zdrowia - NFZ) is the sole public payer responsible for securing access to health care services throughout Poland for all eligible people. Entitlement to inpatient and outpatient services is generally dependent on the payment of a monthly health care fee [3]. The Polish health care system is currently predominantly focused on specialized and inpatient care, based on

providing reactive medical services which are targeted toward poorly informed patients, who may be passive or uncooperative and highly dependent on the system [3,4]. Patients' medical care is driven by and dependent on the efforts of individual physicians, who are therefore regarded by patients as their only partners in the care process.

Based on the agreement with the Ministry of Health (MoH) dated November 28, 2017, the NHF currently facilitates a project entitled "Preparation, testing and implementation of Coordinated Care in the health care system. Stage 2, a pilot phase - Primary Health Care (PHC) PLUS model" [5].

Originally, the project was divided into 3 phases:

1. Creation of concept - developing 3 models
2. Implementation of the model chosen for the pilot program
3. Implementation of the final chosen measures throughout the entire health care system

As previously mentioned, the Primary Health Care PLUS model was chosen and is currently being implemented. The project is financed through European funds and NHF's own resources. The World Bank, which is a neutral partner with no political links to the project, is also involved [3,5].

Primary Health Care PLUS (PHC PLUS), is composed of both regular primary health care services and additional proactive and preventive activities based on plans provided by the PHC teams. It is focused more on preventive tools than on providing medical services after the fact. Objectives of the PHC PLUS include improving the quality of medical services at the primary care health level, increasing the amount of medical services delivered at the primary care health level instead of specialist and inpatient care, focusing on prevention rather than reaction, and coordination of medical services at the primary care health level [3,5]. All members of health professional teams should be regarded as patients' partners, rather than just physicians. The level of supporting technology should be adequate to facilitate the overarching goals [6].

## AIM OF THE STUDY

The purpose of this study is to outline patient demographics and staff structures of providers that took part in the PHC PLUS pilot program, as well as the status of the program throughout the first year of its implementation.

## MATERIAL AND METHODS

### Participants and setting

Following an open and transparent recruitment process, 42 urban and rural primary health care providers were selected. The purpose of the providers' geographic spread was to ensure the model was tested in all representative regions of the country. The entities were

required to adjust their organizational structure and internal IT systems for the purpose of the project. The adjustment process was financed through the project.

## Design

The implementation period of phase II of the project is July 1, 2018 through Dec. 31, 2021. The implementation of the pilot program was divided into stages:

- Stage 1: Selection of project participants (PHC units)
- Stage 2: Adjustment of the PHC units' organizational structure and IT systems to meet the project requirements
- Stage 3: Creation and implementation of an IT platform for cooperation between the NFZ and PHC units for processing generated data, coordinating the project, giving recommendations based on continuous monitoring of the processes, exchanging information between participants, and providing patients with educational information
- Stage 4: Providing health services and monitoring the quality of care

Health services financed by European funds under the PHC PLUS project include:

- performing health risk assessments for adults and conducting extensive educational activities in the field of preventive health
- care management and coordination. (For example, a new position of health care coordinator was introduced to the PHC, remunerated through projects funds.)

Services financed by Regional Branch Offices of the NHF included conducting disease management programs for 11 chronic diseases. The programs were developed by the Medical University of Lodz upon request by the NHF.

An E-learning platform developed as part of project includes:

- educational applications (apps), including mobile versions
- educational materials dedicated to health promotion and disease prevention
- educational films for PHC teams dedicated to organizational aspects of health care providers and management of information in health care organizations

## Data sources

The Polish public payer database was used to extract data concerning Primary Health Care PLUS project participants as well as data reported by health service providers during the project. The database of the NHF contains data on all health services provided to Polish patients financed through public sources.

## Statistical analyses

Microsoft Excel 2013 was used to prepare the results of the statistical analyses.

## RESULTS

### Patients

42 PHC units providing health care services to 288,392 patients are participating in the project. Of the patients in these PHC units, 155,768 (54.01%) are women and 109,623 (38%) are <19 or >66 years old (Tab. 1, Fig. 1–2). More than half of the PHC units (23) are medium-sized care providers which cover anywhere from 5,000 to 10,000 patients in need of primary care services, 13 are small care providers, meaning they serve fewer than 5,000 patients, and 6 are large, serving more than 10,000 beneficiaries.

Table 1. Demographics of the patients in PHC providers involved in the project

Age [years]	Female	Male	Total
0-19	30,149	30,798	60,947
20-24	10,738	8,847	19,585
25-29	12,227	10,721	22,948
30-34	11,456	11,051	22,507
35-39	11,611	10,678	22,289
40-44	11,039	10,007	21,046
45-49	9,121	8,003	17,124
50-54	7,892	6,980	14,872
55-59	8,703	7,029	15,732
60-65	12,719	9,947	22,666
66+	30,113	18,563	48,676
Total	155,768	132,624	288,392

### Medical Staff

Approximately 1,100 medical staff are involved in the project. PHC medical teams consist of specialists including physicians, coordinators, nurses, dietitians, psychologists, physiotherapists and health educators. Often, one person performs several different functions. For example, a primary care doctor is also a specialist and a nurse is also a dietitian or coordinator and health educator (Tab. 2).

Table 2. Medical staff involved in the PHC PLUS project

Medical staff involved in the PHC PLUS project	Total
Primary care physicians	256
Primary care physicians(specialists)	40
Specialists (external and internal)	345
Coordinators	103
Nurses	191
Psychologists	57
Physiotherapists	112
Health educators	90
Dietitians	52
Total	1,246

### Status of project implementation

#### Health risk assessment

Of the patients in the PHC providers, 178,769 patients (62%) were eligible for a health risk assessment based on falling within the required age range of 20-65

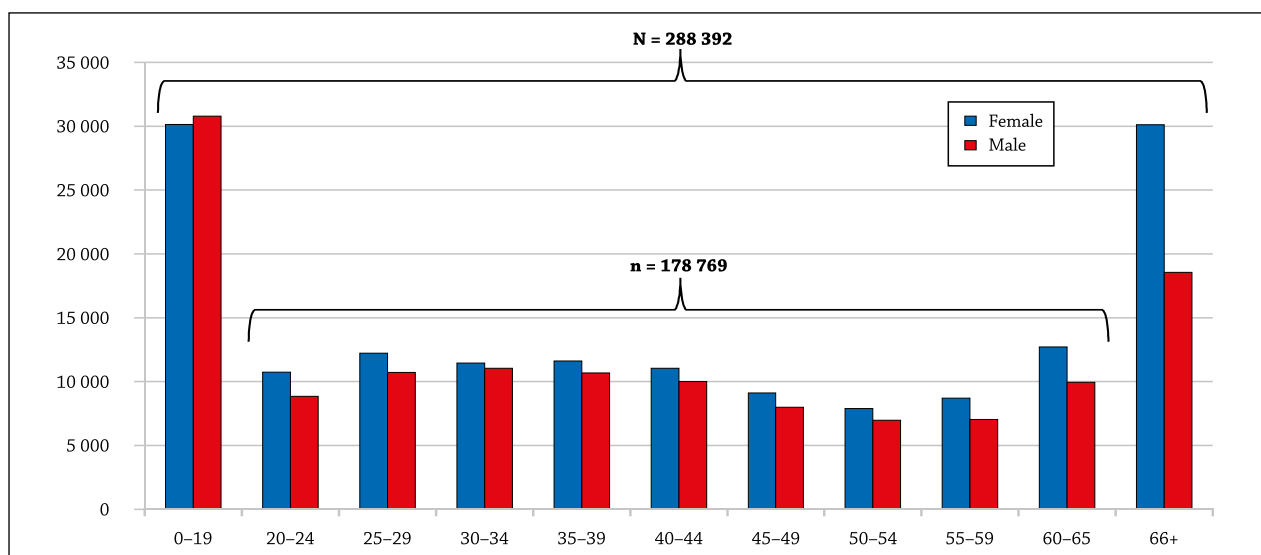


Figure 1. Demographics of the patients in PHC providers involved in the project.

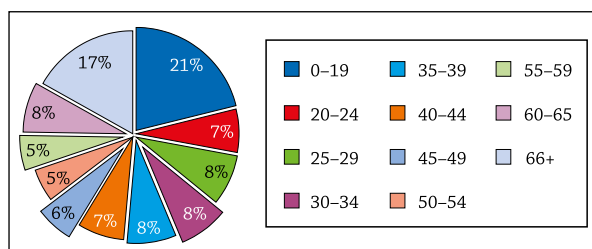


Figure 2. Demographics of the patients in PHC providers involved in the project.

years. To be eligible, patients were also required to have no history of receiving health care services within the prior 12 months. Out of the 41,022 health risk assessments which were to be performed during the course of the project, 18,058 (43.1%) were performed between July 1, 2018 and April 30, 2019, including 4,537 basic and 13,521 extended health risk assessments. Basic health risk assessments include a medical interview, an assessment of basic vital and anthropometric param-

ters, the performance of diagnostic tests, and an overall view of the patient's current health status. Extended health risk assessments should be performed in cases where patients are determined to have health risk factors. Extended assessments include additional diagnostic tests and a discussion of an individual treatment plan based on the aforementioned test results.

**Disease management programs**

The disease management programs began on July 1, 2018 and cover 11 chronic diseases found in adults, including Type II diabetes, spontaneous hypertension, chronic coronary heart disease, chronic heart failure, persistent atrial fibrillation, bronchial asthma, COPD, hypothyroidism, parenchymal or nodular goiter, osteoarthritis of the peripheral joints, and spinal pain syndrome. Eligibility for participation in the disease management programs was based on either a suspicion or diagnosis of a chronic disease. Additionally, the stage of disease should be treatable under primary care. In total, 233,856 patients in the PHC providers were eligible as they were 18 years of age or older. Of these patients, 15,020 (6.4%) participated in the disease management programs through April 30, 2019. The largest group of patients in these programs was

that comprised of people over the age of 60 (6,779 patients or 46%) (Tab. 3, Fig. 3–5). The majority of patients, 11,112 (74%), participated in rheumatology and/or neurology programs, 4,802 (21%) were in cardiology programs, 3,126 (14%) were in pulmonology pro-

Table 3. Potential and actual beneficiaries of disease management programs

Age [years]	Potential beneficiaries of disease management programs	Actual beneficiaries of disease management programs
18-19	6,411	55
20-24	19,585	290
25-29	22,948	437
30-34	22,507	611
35-39	22,289	926
40-44	21,046	1,170
45-49	17,124	1,419
50-54	14,872	1,559
55-59	15,732	1,774
60-65	22,666	2,781
66+	48,676	3,998
Total	233,856	15,020

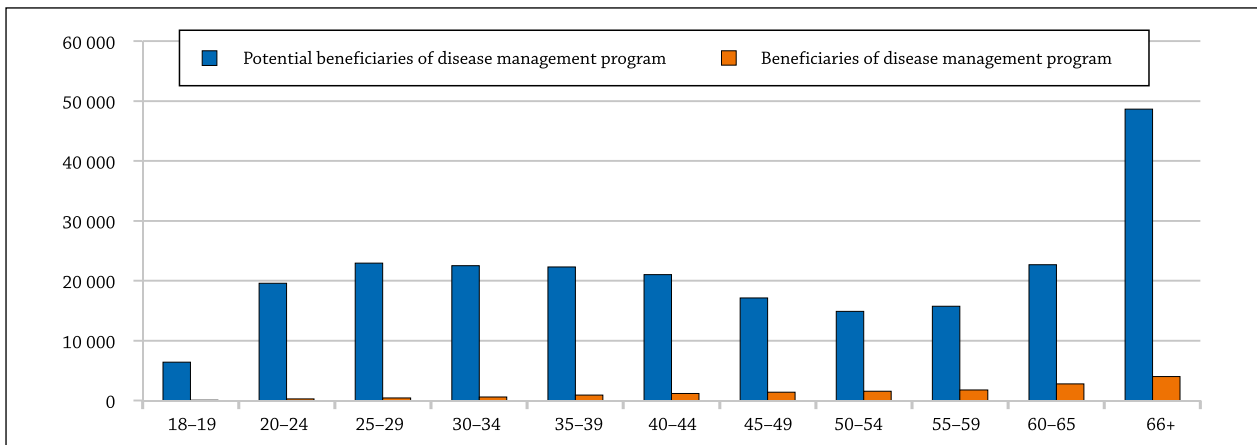


Figure 3. Potential and actual beneficiaries of disease management programs

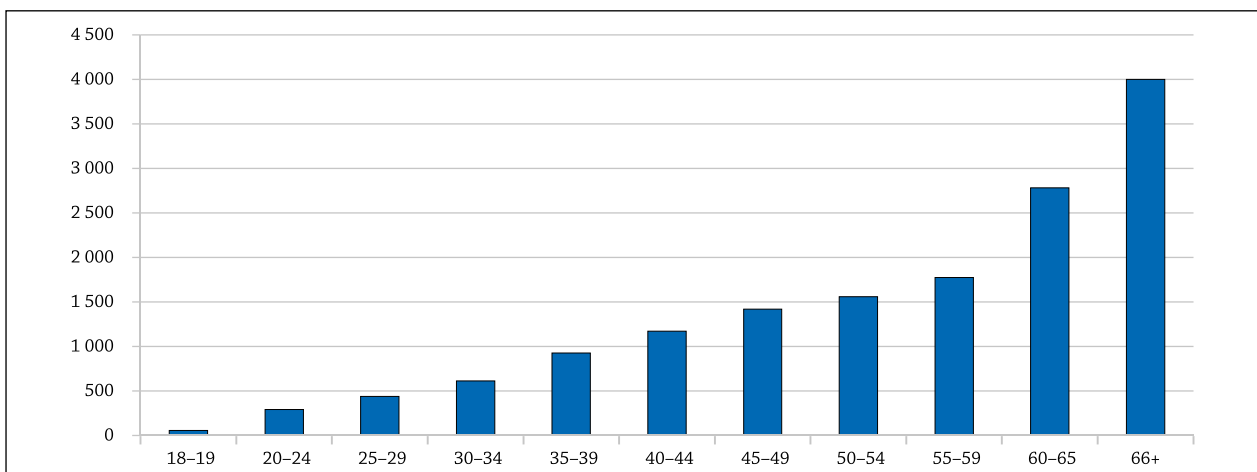


Figure 4. Beneficiaries of disease management programs according to age groups.

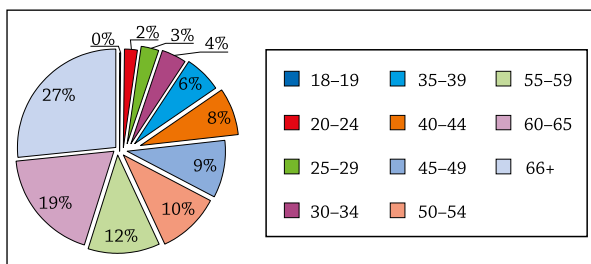


Figure 5. Beneficiaries of disease management programs according to age groups

Table 4. Participation in disease management programs as of April 30, 2019

	Beneficiaries of disease management program
Diabetology	1,001
Pulmonology	3,126
Cardiology	4,802
Rheumatology/neurology	11,112
Endocrinology	3,001
Total	23,042

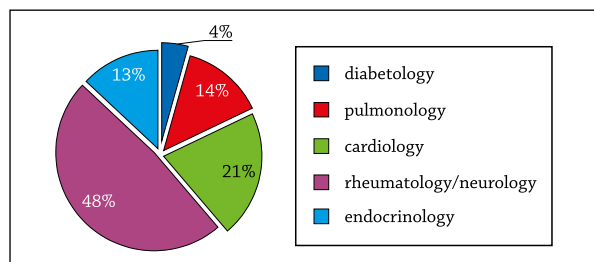


Figure 6. Participation in disease management programs

grams, 3,001 (13%) were in endocrinology programs, and 1001 (4%) were in diabetology programs (Tab. 4, Fig. 6). There were also many patients still within the process of classification, and the number of participants is still growing.

## DISCUSSION

An element that is gaining more and more recognition within the realm of coordinated medical care is health checkups [7–10], the goal of which is population stratification, i.e. identification of healthy and sick patients in order to predict the number and types of services needed for a given group of patients, and to plan and implement interventions potentially changing population health indicators [7,11].

The key issue is the medical value of health checkups, in particular when they are not part of a more complex intervention. Although it is generally considered beneficial to detect the disease earlier, the benefit is only present if the detection is followed by a targeted intervention, e.g. treating the disease, instead of doing nothing. A simple example could be cervical dysplasia.

Its detection can prevent the development of cancer only if it is followed by further, preferably pre-planned therapeutic management.

Among others, the possible benefits of health checkups are:

1. Reducing morbidity and extending life by detecting risk factors for diseases
2. Enabling or accelerating the implementation of preventive treatment, including non-pharmacological interventions aimed at implementing health-promoting behaviors
3. Determining the at-risk groups for the development of chronic non-communicable diseases (NCDs), which are a current challenge for all health care systems. Early implementation of pro-health interventions for these at-risk groups is a chance to stop the early occurrence of NCDs (including complications). It is expected that the implementation of interventions in NCDs at-risk groups will significantly affect the population burden of chronic diseases and change the structure of demand for the medical services of proactive health care systems.

In literature originating predominantly in Great Britain, there are examples of health checkups conducted mainly as national programs for insured people. The lack of benefits highlighted there seems to result mainly from the lack of appropriate interventions implemented after the completion of diagnostic procedures [12,13].

With relatively low outlays on health care, which is the case in Poland, achieving goals for NCDs is difficult. Therefore, one idea is to start health checkups at the age of 20, and combine that with health promotion and targeted educational intervention (behavioral and social) [14]. NCDs in Poland cause about 90% of all deaths [15–16]. The probability of death between the ages of 30 and 70 due to one of the 4 main NCDs (cardiovascular diseases, cancer, chronic lung diseases, and diabetes account for 80% of the NCDs) is about 20%. To the question, “Do evidence-based national guidelines/protocols/standards for the management of major NCDs through a primary care approach exist?”, Poland should replace the current answer of “unknown” with “yes” [15–17].

The main purpose of integrated care interventions consists of reducing fragmentation of service delivery [18,19]. To address this, many approaches have been developed over time. The most well-known are the Chronic Care Model (CCM) [20] and its variation, the Innovative Care for Chronic Conditions model (ICCC), the latter of which was developed by the WHO as part of a ‘road map’ for health systems to deal with the rising burden of chronic illness, placing a premium on prevention, and treating patients and their families as partners [21].

## Implications for research and/or practice

Future reform targets the entire population of Poland, with around 38 million people. People-cen-

tered coordinated care is expected to help care systems achieve the following objectives (Triple Aim goals):

- improving population health
- increasing quality of care for the individual
- lowering per capita costs

This patient-oriented strategy seems to be better adapted to the current health care environment and demographic trends as, by the year 2060, the number of seniors in Poland is expected to double from 5.5 to 11 million. Further analyses to confirm the expected benefits are necessary.

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## CONCLUSIONS

A coordinated care model in primary health care in Poland can help train the focus on preventive interventions instead of on providing medical services to patients already diagnosed with diseases, many of which are already in more advanced stages. The results of the study indicate that the primary health care population will be the main beneficiary of similar future programs. Other beneficiaries include the medical staff necessary for the proper implementation of integrated care models in health care systems similar to the one that exists in Poland.

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