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ORIGINAL RESEARCH

Preventive check-up programme for strengthening people-centred primary health care services in Albania: Case study and lessons learnt

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Abstract

Non-communicable Diseases (NCDs) in Albania are increasing, yet the country has a low number of outpatient visits per inhabitant per year. A primary health care (PHC) based programme of medical check-ups, with a focus on prevention, was set up in the country in 2015 aiming to address this issue, among others. This manuscript describes the development and status of the programme at key time points after its implementation, and considers some of its outcomes.

The current analysis was based on data gathered from the check-up programme information system and the registry of diseases at PHC centres, and guided by the European Framework for Action on Integrated Health Services Delivery.

Based on PHC registered cases, a 13% and 34% increase in the prevalence of elevated blood pressure and diabetes were observed in 2015 respectively, following the introduction of the check-up programme compared to the previous year. Three years after implementation, about 60% of the population aged 35–70 years old had used the programme at least once, with 61% of the total 954 667 visits provided to women.

Overall, the check-up programme in Albania has identified a substantial number of new cases of NCD as well as their associated risk factors in its population. The early detection of NCDs is expected to contribute to the prevention of complications, premature mortality and their associated costs. Albanian politicians and decision-makers should regularly revise and introduce appropriate changes to the check-up programme in the future. In particular, the issue of sustainability and long-term resource mobilization is of particular concern and warrants careful consideration.

Keywords: *Albania, check-up programme, prevention, primary health care.*

Conflict of interests: None declared.

Background

In Albania, non-communicable diseases (NCDs) are estimated to account for 89% of all deaths, with cardiovascular diseases accounting for 57%, cancer 20%, chronic respiratory diseases 3%, diabetes 1% and other NCDs 12% (1). The probability of dying between the age of 30 and 70 years old from a NCD in Albania is 17% (1), and NCDs as a percentage of total disability-adjusted life-years (DALYs) increased considerably from 67% in 2000 to 80% in 2012 (2). Furthermore, lifestyle factors account for more than 70% of the total disease burden in Albania. During the past two decades, the total mortality rate related to being overweight or obese has more than doubled, and the death rate from ischaemic heart disease and diabetes have more than doubled and tripled respectively (3). Despite the increases in NCDs in Albania, the country was reported as having the fewest outpatient visits per inhabitant per year out of the eight countries in south-eastern Europe in 2013, at 2.5 per inhabitant per year, with the average in the WHO European Region at 7.5 (2). This low attendance rate, and consequent delays in addressing health problems, were assumed to be a result of the lack of state funded health care, low population coverage of health insurance and high out-of-pocket payments, which comprised 55% of the total Albanian national expenditure on health in 2014 (4,5). In response to these issues, the government of Albania, in addition to introducing national intersectoral policies targeting the determinants of NCDs, developed and implemented a national medical check-up programme in 2015, aiming to improve the early detection and management of NCDs, and to increase access to and trust in the primary health care (PHC) sector (6-8). The objective of this study was to describe the development and status of the programme at key time points after its implementation, and to quantify some of its outcomes.

Methods and approach

Each of the following factors were initially assessed: the scope/selection of services for the check up programme; the system's delivery capacities; design of patient pathways; organization of providers at the PHC centres; screening management; and the mechanisms in place to ensure performance improvement. Subsequently, the outcomes and impact of the programme were analysed by focusing on indicators such as the early detection of health conditions/metabolic risk factors and changes in the registered prevalence of NCDs as a result of the programme. Two main data sources were used in our analysis: The check-up programme documentation and information system and the registry of diseases at PHC centres. The check-up programme information system, managed by the Ministry of Health and Social Protection (MHSP), is a fully computerized case-based registry, which employs a state-of-the-art BI (business intelligence) system and provides timely information about the result of each patient visit. The registry of diseases, which was set up twelve years ago, contains all prevalent cases of disease diagnosed by a general practitioner (GP) and confirmed by a specialist, within a PHC centre's catchment area. Each PHC centre reports the data periodically to the Compulsory Health Insurance Fund (CHIF) and the aggregated database is shared with the Institute of Public Health. Along with the check-up information system, these registries are considered reliable sources of information as they have frequently (i.e., every three months updated core documentation and are also periodically checked by CHIF supervisors. The current analysis and presentation of findings were guided by the principles put forward by the European Framework for Action on Integrated Health Services Delivery and its approach to transforming the delivery of health services (9). It

includes among others the people-centred approach, which recognizes that before people become patients, they need to be informed and empowered in promoting and protecting their own health.

Results and Discussion

Scope of the check-up programme

Based on the changing health needs of the population resulting from the increasing burden of NCDs, the Albanian government put forward a national health programme with the primary goal of increasing life expectancy by preventing premature deaths. Following international evidence on the role of PHC in addressing NCD-related health needs, the government put priority on improving PHC performance. During 2013/2014 the government conducted detailed preparatory work before launching a primarily preventive programme in 2015 officially named the Essential Medical Evaluation, but announced under the logo *'How are you?'* for all Albanian citizens aged 40–65 years. This was initially set to run over three years, but has subsequently been expanded until 2024. In addition, the target age group was expanded to cover all citizens between 35–70 years at the end of 2016. The size of the initial target group in 2015 was around 1 160 000 inhabitants, which constituted 41% of the total resident population in Albania. The programme, considered by the government as a major step towards universal health coverage, targeted all Albanian residents regardless of their insurance status. The scope of the programme was to assess health status of eligible individuals on a yearly basis in six priority areas highlighted as high priority by the Albanian Institute of Public Health (10) and included several tests (such as blood sugar level and lipid profile, as well as assessment of other key cardiovascular risk factors) to be performed throughout the target population (Table 1).

Table 1. Tests provided in six priority areas of the check-up programme (*Source:* reference number 10)

AREAS	TESTS
Risk factors	Tobacco use Harmful use of alcohol Unhealthy diet Physical Inactivity
Hypertension	Blood pressure measurement
Diabetes	Fasting plasma glucose test Glucose tolerance test (2-hour plasma glucose)
Cardiovascular risk	SCORE (systematic coronary risk evaluation) Family history ECG
Mental health and depression	Patient health questionnaire
Key laboratory tests	Complete blood count Complete urine analysis Faecal occult blood test Liver enzymes: aspartate aminotransferase and alanine aminotransferase Blood lipid analysis Creatinine and urea (since 2016)

The included screening tests were more comprehensive than those previously available in PHC services in Albania (notably the inclusion of laboratory tests) (11), and went beyond evidence-informed recommendations to include areas of priority to the government, including liver enzymes tests, electrocardiogram (ECG) etc. (10,12,13). Furthermore, at the end of 2016, in addition to expanding the age group eligible for screening, the government increased the scope of the check-up programme by increasing the number of laboratory tests, (creatinine and urea tests were added). As of yet, there have been no attempts to reduce the frequency of some of the current tests, despite evidence to do so, but there is a willingness to consider the inclusion of cervical and breast cancer screening as recommended by WHO (12), although this has yet to be implemented.

Capacity for implementing the check-up programme

The MHSP and CHIF implemented the programme through a contract with an external company, which was responsible for purchasing and maintaining equipment and the information technology system in all 380 Albanian PHC centres, training the staff involved in the screening, transporting samples, organizing mobile units to provide screening in remote areas and carrying out all laboratory tests. The government-funded PHC centres were themselves obliged to provide: (i) suitable premises for receiving people coming for a check-up; (ii) a list of the people eligible for screening in their designated catchment area; (iii) a computer for registering and transferring data; (iv) maintaining equipment provided by the contractor; and (v) nurses responsible for check-ups. Larger PHC centres appointed nurses solely responsible for the check-ups, whereas smaller PHC centres usually just expanded the role of the family nurse. This was reflected in higher attendance rates in larger PHC centres due to their larger capacity, whereas smaller centres encountered several challenges in conducting the programme tasks. All PHC doctors and nurses responsible for check-up processes were trained for the task and equipped with an accompanying manual (14) and clinical algorithms, both of which provided guidance on when further investigations and referrals were recommended.

Preventive check-up procedures, referrals and follow-ups

The MHSP clearly defined the processes for the check-ups. All necessary steps involved, as well as the responsibilities of the contractor, PHC centre and secondary health care consultants were clearly stated in a written manual. The check-up appointment itself consisted of an initial briefing on the programme by the nurse, followed by the completion of questionnaires on behavioural risk factors, body mass index calculations based on measured weight and height, an ECG, and the taking of blood samples. Laboratory tests were collected by the contractor on a daily basis. If behavioural risk factors were identified, the patient received a brief intervention consisting of advice and guidance by the nurse. In addition to the 380 PHC centres, mobile units visited 35 remote villages with limited health services, twice a year. The contractor provided the laboratory tests results to each PHC centre and, in case of abnormalities, the stationed GP provided health advice and suitable prescriptions, or referred the patient to a secondary health care clinic, following the well-defined clinical pathways. A check-up programme referral guaranteed free and easy access to secondary health care regardless of the patient's insurance status, with short waiting times to see a consulting

specialist and for any necessary further clinical investigations, as confirmed elsewhere (15). The check-up process was deemed completed after the GP sent the contractor a report with the results of the check-up describing any identified or suspected clinical conditions. These reports were filed before any feedback from subsequent specialists and therefore rarely included a final clinical diagnosis. If the person did not require a referral to a GP, the report was filed by the nurse.

Identification of new cases and changes in registered morbidity

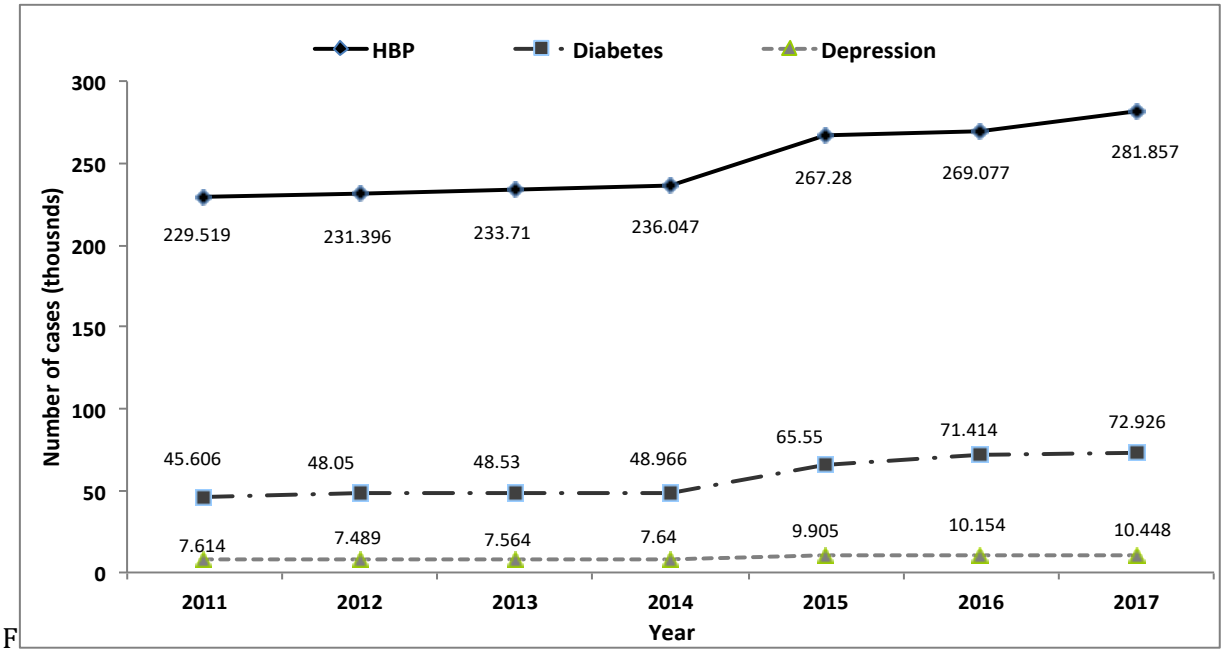
The analysis of check-up programme data determined the extent to which check-ups identified new cases of NCDs, and risk factors associated with NCDs, but also the number of referrals to a specialist. In 2016, of the 329 576 people that underwent a check-up in Albania, 36% had elevated blood pressure (systolic at 140 mmHg or higher and/or diastolic at 95 mmHg or higher); 21% were suspected of having depression; 15% had blood glucose levels higher than 5.5 mmol/L; 9% higher than 7.0 mmol/L; and 1% had a positive faecal occult blood test (Table 2).

Table 2. Distribution of selected medical conditions among 329,576 individuals undergoing a medical check-up in Albania in 2016

Condition	Number	Percentage	Percentage not previously aware of their condition
Depression	69211	21%	76%
High blood pressure	118647	36%	49%
High blood glucose	49436	15%	42%
Positive occult blood in faeces	2637	0.8%	99%

In 2016, there were 39 213 referrals to specialists as a result of the check-ups, although there is no data regarding follow-ups and final diagnoses. A large proportion of people identified as having a medical problem as a result of the check-up had not previously been aware of their condition, with 49% unaware of their high blood pressure status and 42% unaware of their diabetic status in 2016. According to the PHC registries, there was a marked increase in the prevalence of diabetes mellitus, depression and arterial hypertension (34%, 30% and 13% respectively) following the introduction of the check-up programme in 2015 compared to the previous year (Fig. 1). Previous annual increases had only been at around 1% for diabetes, hypertension and depression. Despite the observed increase in the prevalence of PHC registered hypertension, the overall prevalence actually remained low compared to the expected population levels based on WHO NCD country profiles in 2014, where more than 36% of the population (over 25 years old) had hypertension (3,9). Almost three years after the introduction of the check-up programme, at the end of 2017, the prevalence of PHC registered arterial hypertension was only 15%. Similarly, the registered prevalence of diabetes mellitus was lower than expected at 3.8%. It seems that program has yet to diagnose and register all cases of hypertension and diabetes in community.

Figure 1. Number of cases of hypertension, diabetes and depression in NCD registries of PHC centres, from 2011-2017



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Outcomes and impact

Up until February 2018, 54% of all 954 667 check-up visits were carried out in rural areas, which was a strong point of the programme, as one of its objectives was to tackle geographical differences in accessing PHC. It is also worth noting the gender difference in the programme participation, with 61.3% of the check-ups provided to women, in line with the fact that programme compliance was lowest among younger middle-aged men (aged 35–44 years), an issue that deserves future attention. Beyond informing and managing patients suspected of having a NCD, the check-up programme also brought about a number of key changes in the Albanian health sector: (i) It changed traditional attitudes that health services should only be used for perceived and disturbing health problems, with healthy people now attending check-ups aimed at the prevention and early detection of severe health problems, as described elsewhere (16); (ii) it increased trust and utilization of PHC services; and (iii) it increased the accessibility of health services for socially disadvantaged population groups, although more data are needed to confirm the extent of this (17). The perception among health professionals was that Albanian population place a higher value on objective measurements of health, such as laboratory and diagnostic tests, over questionnaires for assessment of behaviour risk factors (16). Therefore, in order to make the intervention more attractive and to increase participation, more laboratory tests were included in the check-up programme in 2016. Overall, the check-up programme raised the awareness of the population for the need of preventive check-ups, with 60% of the people eligible for the check-ups attending at least once in the period March 2015–March 2018. About half of the people screened in 2015 attended a second check-up in 2016. Data on check-ups from the first quarter of 2017 indicated that about one third of the eligible population participated in the check-up programme for the first time, one third for the second time and one

third of them for the third time. The PHC centres were encouraged to invite eligible individuals through all channels they considered appropriate. This included both advertising campaigns and individual letters sent out to each subject, but some barriers still remain both in communication logistics between PHC centres and their communities, and in the low awareness of the importance of the check-up programme in certain population groups, especially young males in the cities. Only 8% of the young middle age (35–44 years) urban male population responded to the invitation. This low level of attendance may reflect different priorities in this population than preventive health, a concern in men's health (18). It may also reflect challenges in accepting a shift from the more traditional role of the Albanian PHC services, which focused on illness and maternal and child health. Hence, the programme still needs to be adapted to the needs and preferences of the male population, especially given that a higher prevalence of several NCDs and their risk factors are expected among men. At the end of 2016, the government extended the check-up programme and from the beginning of 2017 free PHC visits for the entire population, covering all health conditions, were introduced, along with easy access to specialized services, targeting this overall aim of providing universal health coverage.

Conclusions

The check-up programme has been an important intervention in strengthening the PHC service in Albania. It has helped improve access to, and build more awareness about preventive care among the Albanian population. There is a general consensus among professionals that the program has created the basis for better service attendance and improved health seeking behaviour in Albanian adults, as well as restoring trust and communication between health professionals and communities (16). Yet, there are areas to be addressed within the programme in the future. Notably, the programme needs to focus on encouraging men to also attend check-ups, and needs to assess potential differences in participation rates between different socioeconomic population subgroups. This information is currently not available. Overall, the check-up programme in Albania has identified a substantial number of new cases of NCDs and risk factors associated with chronic disease. The early detection of a NCD is expected to reduce the development of related complications, as well as premature mortality rates, which in turn should reduce the associated costs. However, policy makers need to continue to support and shift more resources to PHC services to cover the increase in workload for PHC GPs and nurses. To ensure the effectiveness of the check-up programme and improvements in the overall health status of the population, however, it is not sufficient to have a well-funded check-up programme if it is based in the framework of low-resource PHC facilities, with a limited capacity for the follow-up and management of patients with NCDs. The check-up programme needs to be accompanied by a more advanced primary health care model that would include NCD management by well-trained family doctors and PHC nurses, supported by other members of a multidisciplinary team (for example psychologists, health educators, public health specialists), as required. In addition, the programme should be further optimized by revising the scope of tests, the targeted age groups, and the frequency of the tests according to age and health status. For example, a number of tests including in the check-up programme, including ECG, liver enzyme tests and complete urine analysis, among others, have not been shown to be effective in population based screening (19), and should therefore only be used for opportunistic

screening of patients at risk for a particular disease. This would optimize resources within the programme potentially allowing for the introduction of other evidence-based tests, including the screening of some cancers, as well as the better follow up of detected cases. Overall, a better financial optimization is required to encompass both the costs of further investigation and specialist consultations, which are currently covered by health insurance, in addition to the cost of the check-ups. The check-up programme has also helped raise the professional profile of PHC nurses, by transferring to them some essential tasks previously carried out by physicians. The check-up programme could gradually introduce PHC nurses responsible for a particular district, so that every individual would receive a more comprehensive service from their own nurse, including check-ups, behaviour change counselling, and follow-ups for patients with NCDs. Such a model should be supported by clear clinical guidelines and should include some form of both performance measurement and accountability for health personnel – along with supporting incentives (for example the revision of remuneration schemes) – with patients reaping the benefits. User-friendly and culturally-sensitive information campaigns aimed at all levels of society each at an individual, family, and community-based level will be important for the future of the programme. In addition, measures to enhance the responsibility of citizens themselves to participate in the check-up programme should be gradually introduced, and incentives towards this aim need to be considered. In conclusion, the current case study is an example of how a country in the WHO European Region with limited resources was able to make prompt resource mobilization and to strengthen the role of PHC in NCD control. However, Albanian politicians and decision-makers need to be able to regularly revise and introduce appropriate changes to the check-up programme in the future. In particular, the issue of sustainability and long-term resource mobilization is of particular concern and deserves careful consideration.

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