

Non-communicable diseases: Prevention and control device, Algeria

Youcef Tarfani¹, Mohamed L'Hadj², Hakim Leklou³, Mohamed Djellaoui³

¹Epidemiologist Ministère de la Santé de la Population et de la Réforme Hospitalière, Algiers, Algeria.

²Pneumologist Ministère de la Santé de la Population et de la Réforme Hospitalière, Algiers, Algeria.

³Neurologist Department of Neurology, Bab El Oued University Hospital, Algiers, Algeria.

Abstract:

Background: Non-communicable diseases (NCDs), represented mainly by cardiovascular disease, cancer, chronic respiratory disease and diabetes, currently pose a serious threat to human health and development. These four diseases are the leading causes of death in the world. In Algeria, chronic non-communicable diseases are a major public health problem. In fact, from the 1990s, Algeria experienced an epidemiological transition which resulted in an increasingly heavy burden of non-communicable diseases (NCDs) on the national health system.

Materials and Methods: The prevention and control system put in place by the Ministry of Health (MSPRH) is part of the comprehensive and integrated approach to combating non-communicable diseases and promoting healthy lifestyles as recommended by WHO, in the extent to which it is dictated by the existence of risk factors common to these diseases.

Results: We show statistics on the different non-communicable diseases in Algeria (metabolic diseases, cancer diseases, chronic respiratory diseases, blinding eye diseases, smoking, obesity).

Conclusion: With the demographic and epidemiological transition, Algeria faces multiple challenges in the prevention and management of non-communicable diseases.

Key Word: non-communicable diseases; Public health; Prevention; Algeria.

Date of Submission: 19-06-2020

Date of Acceptance: 06-07-2020

I. Introduction

Non-communicable diseases (NCDs), represented mainly by cardiovascular disease, cancer, chronic respiratory disease and diabetes, currently pose a serious threat to human health and development. These four diseases are the leading causes of death in the world; it is estimated that they cause 35 million deaths each year (60% of all deaths worldwide) 80% of which occur in low- and middle-income countries. These diseases are preventable. Up to 80% of heart disease, stroke and type 2 diabetes and more than a third of cancers could be prevented by eliminating the risk factors that these pathologies have in common, namely mainly smoking, poor diet, physical inactivity and harmful use of alcohol.

Left unchecked, the mortality and disease burden associated with these health problems will continue to increase. According to WHO projections, deaths from non-communicable diseases will increase by 17% worldwide over the next ten years. Non-communicable diseases, which are not only a public health problem but also a socio-economic problem, have been the subject, since 2000, of the adoption by the World Health Assembly of several resolutions in favor of the fight against these NCDs.

In Algeria, chronic non-communicable diseases are a major public health problem. In fact, from the 1990s, Algeria experienced an epidemiological transition which resulted in an increasingly heavy burden of noncommunicable diseases (NCDs) on the national health system. The proportion of deaths from NCDs is 60% in Algeria. Cardiovascular disease ranks first (26.1%), followed by perinatal conditions (13.5%). Malignant neoplasms, respiratory tract diseases and diabetes mellitus with 16%, 7.6% and 7.4% respectively.

II. Material And Methods

A National device for the prevention and control of NCDs: The prevention and control system put in place by the Ministry of Health (MSPRH) is part of the comprehensive and integrated approach to combating non-communicable diseases and promoting healthy lifestyles as recommended by WHO, in the extent to which it is dictated by the existence of risk factors common to these diseases. The program implemented was structured around the following axes:

1. Establishment of a database on the burden of disease, risk factors and main determinants of noncommunicable diseases. In 2010 was developed

- The medical file for basic care for the chronically ill,
 - The extension of registers of chronic diseases: diabetes, cancer, coronary artery disease.
2. Revitalization of the national medical committee for integrated control of noncommunicable diseases including the following medical committees (Cardio-vascular diseases committee, Diabetes committee, Respiratory diseases committee, tobacco committee, physical activity and food committee and committee for the promotion of primary care).
 3. Continuation of actions to reduce risk factors by promoting awareness-raising activities: tobacco control, promotion of healthy eating, promotion of physical activity.
 4. Development of specific plans Since 2010, this axis has been a national priority and the cancer plan is the first. These specific plans, which require significant human and financial resources, aim, in particular, to:
 - Support the screening of prevalent NCDs as a priority action in the expansion of the offer of local care because of its effectiveness as a means of early diagnosis and reduction of care costs,
 - Strengthen health care for the chronically ill based on primary health care, close to the patient,
 - Develop therapeutic education as an effective means for treatment compliance and the reduction of complications,
 - Develop benchmarks and good practice guide for health care to be provided to patients in primary care essentially in the interests of equity and accessibility and quality of care,
 - Develop a network for the management of these chronic diseases within the framework of structured multidisciplinary management and equitable access,
 - Create a national multisectoral framework with “pillar” sectors such as local communities, education, agriculture, trade, the environment and sports to prevent and combat noncommunicable diseases and consequently create favorable environments for health helps society to adopt healthy habits and lifestyles.

III. Results

Epidemiological situation of NCDs in Algeria:

1. **Metabolic diseases:** High blood pressure and other cardiovascular diseases rank first among noncommunicable diseases by their prevalence. In 2017, the prevalence of high blood pressure was 23.6% (M: 23.1%, F: 24.1%).

The prevalence rate of type 2 diabetes in Algeria in the adult population aged between 18 and 69 is around 14.2%. The prevalence rate of type 1 diabetes is estimated at 0.58% in children of 15 years old and less than 40% of diabetics in Algeria are insulin-treated.

The prevalence rate for total hypercholesterolemia ≥ 1.90 mg / dl or under treatment for hypercholesterolemia was 24%.
2. **Cancer diseases:** According to data from cancer registers, global estimates give around 45,000 new cases each year with a crude incidence rate of 112.2 cases per 100,000 inhabitants. It is 93 new cases per 100,000 inhabitants for men and 133 new cases per 100,000 for women.

The predominance of cancers in men is, in gross incidence, represented by that of the colon and rectum (15.2), the lung (12.5), the prostate (12.3), the bladder (10.5) and the stomach (7.4); these cancers alone represent nearly 52.5% of male cancers.

The predominance of cancers in women is, in crude incidence, represented by that of the breast (47.3), the colon and rectum (11.9), the thyroid (9.3), the cervix (7.2) and the 'ovary (5.9), which alone accounts for almost 68.2% of all female cancers.

All of these cancers can benefit from either primary prevention, early diagnosis, or both. It should be noted that only around 30% of confirmed cancers are diagnosed at a stage compatible with recovery and a long survival time. In addition, more than 35% of confirmed cancers receive therapy at relatively late stages and around 35% of these confirmed cancers have no extension assessment.

This always indicates a major weakness in the organization of care and access to care for cancer patients with bottlenecks that are always persistent, which has a negative impact on very long treatment times and failure to meet deadlines. inter-cures.

All this justifies the merits of the vast cancer plan currently being implemented.
3. **Chronic respiratory diseases:** Chronic diseases of the respiratory system are the leading cause of morbidity (25.22%) and the fourth leading cause of death (6.8%).

In frequency among noncommunicable diseases, chronic diseases of the respiratory system come in third place with an incidence of 7.6%, after cardiovascular diseases and cancers. Among these diseases, the prevalence of asthma is 3.75% and that of chronic obstructive pulmonary disease is 0.58%.
4. **Blinding eye diseases:** Blindness is a global public health problem. Population growth, increased life expectancy and an aging population will nonetheless increase the risk of visual impairment.

Algeria joined the WHO global initiative "vision 2020". This resulted in:

- The finalization, in 2010, of the first national survey on blinding eye diseases in people aged over than 40. The results of this survey showed the following prevalence rates: cataract (13.8%), glaucoma (4.6%), diabetic retinopathy (2.4%), corneal conditions (1.7%) and trachoma (0.7%),
 - the creation of a national committee for the prevention and fight against avoidable blindness, in February 2011,
 - the development of the 2010-2014 master plan which aims to eliminate trachoma by 2020 in accordance with the global initiative and to reduce the most prevalent eye diseases, in particular by:
 - The introduction of screening and early management of blinding eye diseases in basic care units.
 - The acquisition of equipment necessary for screening and diagnosis.
5. **Smoking:** The fight against the risk factor common to several noncommunicable diseases that is smoking is a priority, especially since our country ratified the WHO Framework Convention on Tobacco Control (FCTC) in March 2006 (presidential decree 06-120 of March 12, 2006).
The surveillance system based on the carrying out of surveys on tobacco consumption and the survey carried out by the MSPRH in 2017 among people aged between 18 and 69 years shows an increasing trend with 16.2% smoked tobacco consumption rate and an 8.2% smokeless tobacco consumption rate.
6. **Obesity:** The overall prevalence of overweight and obesity (BMI ≥ 25 Kg / m²) was 55.6% (Men: 48.3%, Women: 63.3%), or nearly one man among two and two women among three are obese.

IV. Discussion

The general problem, in the field of prevention and fight against noncommunicable diseases, results from the effects of the epidemiological and demographic transition that our country has gone through. It is dominated by:

- **Communicable diseases** which are on the decline as a result of the combined effect of national development, improved health coverage and the implementation of national prevention programs. However, if certain ailments have been eradicated or are in the process of elimination, the fact remains that others such as diseases linked to environmental health still manifest themselves in an endemo-epidemic form and that the threat of Communicable diseases emerging and / or re-emerging require vigilance and increased health monitoring.
- **Noncommunicable diseases** which are on the rise, as evidenced by the number of cases of cancer, metabolic, cardiovascular, chronic kidney and neurological diseases which increases from year to year. This is a public health problem, moreover global, which preoccupies the health authority and which requires adapted, integrated and complementary responses.

It is useful to remember that the increase of noncommunicable diseases is linked to changes in lifestyles due to the urbanization of the population (pollution, stress), changes in eating habits (Fast food, "pleasures"), tobacco use and excessive sedentary lifestyle (vehicle, TV, etc.) and the aging trend of the population in connection with the increased expectation of life of Algerians.

V. Conclusion

With the demographic and epidemiological transition, we are faced with new challenges such as:

- Information literacy,
- Development of NCDs control programs (HTA, Diabètes, Cancer, Respiratory diseases, blinding eye diseases etc...),
- Strengthening of the multisectoral approach to health problems,
- Mastery of new health technologies,
- Control of the supply of health products.

References

- [1]. Stratégie mondiale de l'OMS pour la lutte contre les maladies non transmissibles, OMS, 2000
- [2]. Convention-cadre de l'OMS de la lutte antitabac, 2003
- [3]. Stratégie mondiale pour l'alimentation, l'exercice physique et la santé, 2004
- [4]. Résolution WHA60.23 sur la lutte contre les maladies non transmissibles: mise en oeuvre de la stratégie mondiale
- [5]. Rapport de l'OMS sur l'épidémie mondiale du tabagisme, 2008
- [6]. Plan stratégique à moyen terme 2008 – 2013
- [7]. Plan d'action pour la stratégie mondiale de lutte contre les maladies transmissibles 2013 – 2019
- [8]. Registre national des cancers, 2017
- [9]. Enquête STYEPS sur la mesure des facteurs de risqué des maladies non transmissibles, Algérie 2017

Youcef Tarfani, et. al. "Non-communicable diseases: Prevention and control device, Algeria". *IOSR Journal of Dental and Medical Sciences (IOSR-JDMS)*, 19(7), 2020, pp. 01-03.