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Critical analysis of Algerian cancer control policy: Challenges, strategies and prospects for improvement

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Abstract:

The aim of this study is to provide an in-depth analysis of cancer control policy in Algeria, focusing on its positive aspects and potential shortcomings. It will provide a better understanding of the current issues and challenges facing the country in this important area of public health. By examining the policies and strategies in place, we will highlight the progress that has been made to date in the fight against cancer in Algeria. This includes significant advances in awareness, early detection, accurate diagnosis, and effective treatment. We will also look at the challenges facing the Algerian health system, such as lack of access to quality care, problems in the coordination of health services, and the need to strengthen medical infrastructures. For the future of cancer control in Algeria, we will present key recommendations for improving existing policies and interventions. These include measures to strengthen prevention, promote healthy lifestyles, improve access to care, support research, and build the capacity of health professionals. To achieve this, a descriptive and analytical methodology will be used, based on available data, reports from health organizations, and interviews with experts in the field.

Key words: Cancer; Challenges; Public health; Treatments; Patients.

Introduction

The fight against cancer is a major global and national issue with the number of cancer cases on the rise. The increase in cancer cases is a global and national phenomenon that requires in-depth analysis. Worldwide, cancer has become a major public health problem due to the constant increase in its incidence and prevalence. The situation is no different in Algeria, where the number of cancer cases has increased significantly in recent decades. Risk factors such as smoking, obesity, exposure to radiation, and viral infections are of major concern. It is essential to monitor the evolution of this situation and to understand the specific challenges Algeria faces in its fight against cancer.

In order to analyse data and trends on the prevalence of cancer in Algeria, it is essential to examine the available statistics on diagnosed cases, survival rates, the most common types of cancer, and the geographical distribution of the disease. These data will be used to identify priority needs, assess the impact of current cancer control policies, and target areas for improvement. In addition, analysis of trends over time will provide an overview of progress, remaining challenges, and opportunities to improve the effectiveness of prevention, screening, and treatment strategies.

The aim of this study is to carry out an in-depth analysis of current cancer control policy in Algeria. This involves identifying the strengths and weaknesses of the current system as well as exploring future prospects for improving the prevention, treatment, and follow-up of cancer patients.

Based on objective data, reports from reliable health bodies, and interviews with experts in the field, this critical analysis aims to provide concrete recommendations for strengthening cancer control policy in Algeria.

To carry out this study, a descriptive and analytical approach was followed, based on the analysis of available data concerning cancer control policy in Algeria. Reports from health organisations were examined in order to gather precise information on the prevalence of cancer, the impact of the disease, and the various strategies in place. In addition, interviews were conducted with health experts to obtain in-depth insights into the strengths, weaknesses, and prospects for improvement of the current cancer control policy in Algeria.

1. Key figures on cancer in Algeria: A worrying trend

Cancer is a major public health problem in Algeria, with an increasing incidence over the years. A sociological analysis of the figures sheds light on public health issues, social inequalities, and the far-reaching implications for the country's healthcare system. Although the statistics vary, a number of recurring trends and issues emerge when examining the evolution and impact. Here is an overview of the statistics and trends concerning cancer in Algeria.

In 2014, the number of new cases of cancer recorded was 41,870, with an overall crude rate of 106 per 100,000 population and a standardised rate of 114.5 per 100,000. The standardised incidence rates for men were 109.2 per 100,000 and for women 119.8 per 100,000. (HamdiCherif, M., 2018).

Cancer figures in Algeria, as in many other countries, are rising rapidly. According to the latest figures, cancer is one of the leading causes of death in the country. Algeria records around 50,000 new cases of cancer every year. This rise is linked to a number of factors:

- The ageing of the population: life expectancy is increasing, leading to a rise in the number of cancers, particularly those linked to age.

- Lifestyle changes: Increasing urbanisation, dietary changes (diets richer in fats and sugars), sedentary lifestyles, and increased consumption of tobacco and alcohol are well-documented risk factors.

- Improved diagnosis: Progress in cancer detection, thanks to more effective medical tools, has also contributed to the apparent increase in cancer incidence.

The incidence of cancer in Algeria varies considerably across the country, influenced by various sociological and environmental factors. These disparities are attributed to differences in risk factors, access to healthcare, and levels of cancer awareness:

- Inequalities between urban and rural areas: Large cities, such as Algiers, Oran, and Constantine, record a higher number of cancer cases, partly because of better access to care and greater awareness of the disease. Between 1986 and 2010, for example, Sétif recorded standardised incidence rates for all cancers of 106.4 per 100,000 for men and 110.3 per 100,000 for women. The most common cancers were lung, colorectal, bladder, and prostate cancer in men and breast, colorectal, cervical, and thyroid cancer in women (HamdiCherif, M., & al. 2014). On the other hand, rural areas suffer from a lack of health infrastructure and medical services, which affects the diagnosis of the disease.

- Access to care: Inequalities in access to healthcare are a determining factor in treatment outcomes. Populations in less developed regions often face delays in diagnosis and treatment, which increases mortality rates. For example, between 2000 and 2010, Mascara recorded a standardised incidence rate for all cancers of 27.8 per 100,000 for women and 23.6 per 100,000 for men. The most common cancers were liver cancer in both sexes, breast cancer in women, and lung cancer in men. (Benarba, B., & al. 2014).

- Socioeconomic status and education: people with higher socioeconomic status tend to have better cancer survival rates, partly due to better access to care and increased awareness of cancer symptoms. A higher level of education is associated with a reduced risk of colorectal cancer (Negrichi, S., & Taleb, S. 2020).

The cancer profile in Algeria can be considered typical of developing countries, with certain types of cancer being more prevalent:

- Breast cancer: This is the most common cancer among women in Algeria, followed by colorectal cancer and cervical cancer. The increase in these cancers is partly linked to changes in lifestyle and increased detection. Passive smoking, social problems, and sun exposure are strongly associated with the risk of breast cancer.

- Gastric and colorectal cancer: these types of cancer are also fairly widespread, particularly as a result of increasingly industrialised diets. Colorectal cancer is the second most common cancer after breast cancer in Algeria, with a standardised annual incidence rate of 23 per 100,000 for men and 16 per 100,000 for women. The prevalence of colorectal cancer increases with age and is associated with a high body mass index (Mazouzi et al., 2023).

- Lung cancer: lung cancer is a major cause of mortality in Algeria and is predominantly male, with an incidence of 5.8 per 100,000 in men and 1.0 per 100,000 in women, and 94.59% of patients being smokers. (Otsmane et al., 2018)

A sociological analysis of cancer figures in Algeria reveals a complex situation characterised by an increasing incidence of the disease, geographical and social inequalities influenced by socioeconomic factors, and significant challenges in terms of access to care. Greater efforts to raise awareness and provide more equitable treatment could help to reduce these inequalities, while more targeted prevention policies and improved health infrastructures are needed to combat this silent epidemic more effectively. Beyond its medical dimension, cancer in Algeria is also a social problem that requires a health, economic and societal response.

2. Background on the fight against cancer in Algeria

Algeria is facing an increasing prevalence of cancer, with an estimated 400 new cases per 100,000 population each year. This increase is mainly due to factors such as an ageing population, urbanisation and the adoption of less healthy lifestyles. The burden of cancer is felt not only in terms of public health, but also economically and socially, highlighting the importance of better understanding and combating this disease. (Benbekhti, p. 2020)

The prevalence of cancer in Algeria has a major impact on the health system and the population. Survival rates for many types of cancer remain woefully low due to often late diagnosis and inequitable access to effective treatment. In addition, the significant costs associated with cancer treatment place great financial pressure on patients and their families, particularly those living in remote, geographically isolated or economically disadvantaged areas (in a situation of economic vulnerability). It is therefore imperative to develop, design and implement effective and concrete strategies to improve prevention, conduct earlier screening and ensure full and equitable access to the care needed to effectively combat and manage this extremely worrying public health issue. (Raiah M. et al, 2022)

- The policy and legislative framework for cancer control in Algeria

The political and legislative framework for cancer control in Algeria is based on a history of policies aimed at combating this disease. Since the first initiatives, the country has gradually developed specialised centres and involved various actors such as the Ministry of Health, health institutions, NGOs and international organisations. At the same time, specific legislation and public policies on health and cancer prevention have been put in place to provide a framework for action. This background provides a basis for assessing current cancer control strategies and identifying areas for improvement to strengthen the existing policy and legislative framework.

The history of cancer control in Algeria shows a remarkable evolution in public health policy, marked by the gradual assumption of responsibility for this dreaded disease. Over the years, the first initiatives have led to the creation of renowned specialised centres and the establishment of structures dedicated to cancer care and research, demonstrating the country's unwavering commitment to this fight. These different stages in the development of cancer control policy in Algeria have made it possible to analyse in depth the strengths and weaknesses of the policies implemented, as well as the challenges encountered in their application. A historical analysis of this kind is therefore an essential starting point for considering concrete prospects for improvement and for proposing sound recommendations aimed at further strengthening cancer control policy in Algeria. It should be emphasised that, despite the progress made, challenges remain. Access to care, particularly in rural and remote areas, remains a major concern. Similarly, raising public awareness of risk factors and prevention measures remains a key issue. Finally, strengthening early diagnosis and treatment capacity and continuing research into new treatments must remain absolute priorities. (Raiah M. et al. 2022)

In this spirit of continuous improvement, it is essential to mobilise all available resources, be they human, technical, financial, or organisational. A solid partnership between the government, civil society, health professionals, and patients is also essential to ensure optimal coordination and effective implementation of policies to combat this scourge. In conclusion, the history of cancer control policy

in Algeria demonstrates a genuine desire to combat this devastating disease. However, it is essential to continue to invest in strengthening health policies and implementing concrete measures to improve the care of cancer patients. Only a concerted effort by all stakeholders will make it possible to effectively combat cancer and preserve the health and well-being of the Algerian population.

- Public health policy evolution in Algeria

The evolution of public health policy in Algeria with regard to cancer care dates back to the early 1980s, with the creation of the first specialised centres in the country. These initiatives have been strengthened over the years with the introduction of screening, diagnosis, and treatment programs and the development of dedicated infrastructure. The early stages of the fight against cancer in Algeria have highlighted the need for a multidimensional approach that includes strengthening medical skills, raising public awareness, and coordinating efforts at the national level. (Azri, K. & Brahamia, B. 2023)

The Ministry of Health plays a central role in the fight against cancer in Algeria by developing public health policies, coordinating prevention and treatment initiatives, and supervising health facilities throughout the country. Health facilities, whether public or private, are responsible for providing screening, diagnosis, treatment and follow-up services for cancer patients. NGOs also play an important role in providing psychosocial support to patients, helping to raise public awareness and advocating for better cancer control policies. Finally, international organisations such as WHO and IARC provide technical support, resources and recommendations based on global best practice to strengthen national cancer control capacities. (Denis, F. & Henrard, J. C. 2024)

Legislation and regulations in Algeria on health and cancer prevention are essential to provide a framework for action against this disease. It is important to analyse existing legislation on public health, cancer prevention, screening, treatment and patient care. This analysis will make it possible to assess whether current policies are adapted to the needs of the population and whether adjustments or reforms are necessary to improve the effectiveness of cancer control measures in Algeria. (Hallouch, F. A. 2021).

3. Evaluating cancer control strategies

Cancer prevention and awareness in Algeria have been strengthened through the promotion of healthy lifestyles and the introduction of screening campaigns. However, access to care and treatment remains a major challenge due to the lack of modern infrastructure, regional disparities and shortages of certain drugs. In addition, the lack of reliable data and socio-cultural and economic barriers make effective cancer control planning difficult. In terms of financing and resources, the budget allocated, the human and material resources available and the public-private partnerships are key elements that need to be assessed in order to improve the overall strategy for combating this disease. (WHO Regional Office for Africa, 2021)

- Efforts to prevent cancer:

Prevention and awareness are at the heart of cancer control efforts in Algeria. Awareness campaigns are regularly conducted to inform the population about risk factors, behaviours to prevent the disease and the importance of early detection. Promoting healthy lifestyles, such as a balanced diet, regular physical activity and not smoking, is also an important part of prevention strategies. Screening campaigns are also organised to enable early diagnosis and appropriate treatment of patients. These efforts are essential to reduce the incidence of cancer and improve public health outcomes.

- Access to care and treatment:

Access to cancer care and treatment in Algeria faces several major challenges that require serious attention from the relevant authorities. First, it is essential to take steps to modernise the existing medical infrastructure to better meet the growing needs of patients. This includes the renovation and expansion of hospitals and the acquisition of state-of-the-art diagnostic and treatment equipment.

It is also essential to address the current shortage of diagnostic and treatment equipment. Although there are cancer treatment centres, such as the one attached to the surgical clinic of the Algiers hospital, there is a need to install more radiological and radium equipment for teletherapy. (Benarba et al., 2014) It is imperative to strengthen the existing stock by investing in state-of-the-art equipment such as scanners, MRIs and radiotherapy machines. This will make it easier to detect cancers early and accurately and to introduce more effective, targeted treatments.

Another major challenge is unequal access to treatment for patients across the country. While some patients have the opportunity to receive the best treatment available, others, particularly those

living in remote areas, find it difficult to access the care they need. It is therefore vital that arrangements are made to ensure equal access to treatment, particularly for people living outside the major cities. This could be done by setting up specialised centres in remote areas, organising awareness campaigns and facilitating patient transport to treatment centres.

At the same time, training for health professionals needs to be stepped up. It is essential that doctors, nurses and other medical staff have the knowledge and skills they need to provide the best possible care for cancer patients. This can be achieved by setting up continuing education programmes, encouraging participation in conferences and establishing partnerships with internationally renowned medical institutions.

In conclusion, it is essential to develop a more extensive and better-equipped healthcare network, provide high-quality training for healthcare professionals, and improve access to treatment for cancer patients in Algeria. By taking action in these key areas, it is possible to significantly improve access to care and increase patients' chances of recovery. This is a collective effort that requires the cooperation of medical authorities, healthcare professionals, NGOs and society as a whole. (Bouchicha N. E. & Lounaci, A. 2024)

- Budget allocated to cancer control, human and material resources available and public-private partnerships

The budget allocated to cancer control in Algeria is mainly financed by the government, with resources coming from the Ministry of Health. However, there are challenges in allocating resources, as funding is often insufficient to meet growing needs. In terms of human resources, the country faces a shortage of health professionals specialising in cancer care. What's more, available equipment and infrastructure is unevenly distributed across the country, with a concentration in the major cities. To overcome these challenges, studies suggest that the development of public-private partnerships in Algeria could mobilise additional resources, improve access to care for cancer patients and reduce mortality through innovative medical infrastructures and better planning of health services. (Nesrine, B., & Azzedine, B. 2018)

4. Major challenges facing Algeria's cancer control policy

Algeria's cancer control policy faces a number of major challenges, particularly in terms of access to care and treatment. First of all, there are structural problems such as the lack of modern infrastructure, the lack of reliable data, in particular the lack of accurate statistics, and socio-cultural and economic barriers such as access to care and the taboos associated with the disease.

- Structural problems:

Algeria's cancer control policy faces major structural problems, including a lack of advanced infrastructure, regional disparities in access to care and a shortage of certain drugs and treatments. Healthcare infrastructures, particularly in rural areas, are not always adapted to effectively diagnose and treat cancer, which limits patients' access to specialised care. In addition, regional disparities lead to inequalities in access to treatment and health services, particularly due to the concentration of resources in large cities. Finally, the lack of certain essential drugs and treatments is a major obstacle to cancer care in Algeria, putting patients' lives at risk. (Faiman, B. 2023) These structural problems require immediate attention and concrete measures to improve the situation.

- Lack of reliable data:

The lack of reliable figures is a major obstacle in the fight against cancer in Algeria. The lack of accurate statistics and national registries on the disease makes it difficult to assess the true extent of the problem and to plan effective prevention, screening and treatment interventions. This gap also affects the ability to allocate resources appropriately and target the most vulnerable populations. Establishing national cancer registries and improving data collection and analysis systems are therefore key priorities for strengthening cancer control in Algeria. It is essential to develop a robust infrastructure for data collection, storage and sharing, which will enable more accurate assessments and a better understanding of trends and risk factors (HamdiCherif, M, 2018).

In addition, quality data can help researchers and healthcare professionals develop more effective interventions and strategies to prevent, detect and treat cancer. Therefore, training and awareness programmes are needed to build the capacity of healthcare professionals in data collection and the use of registries.

By encouraging collaboration between different institutions and supporting cancer research, Algeria will be able to make significant progress in the fight against this devastating disease. Improved data availability and coordination among stakeholders will facilitate informed decision-making and the continuous improvement of cancer control policies and programmes in Algeria. The ultimate goal is to reduce the impact of cancer in Algeria by improving early detection, access to quality care and quality of life for patients. (Nesrine, B., & Azzedine, B. 2018)

- Socio-cultural and economic barriers:

Socio-cultural and economic barriers play an important role in the fight against cancer in Algeria. Firstly, lack of public awareness is a major barrier. Many Algerians are not sufficiently informed about the risks of cancer, the symptoms to look out for and the means of prevention. Secondly, socio-economic factors affect access to treatment, as some disadvantaged populations find it difficult to seek treatment due to financial constraints and distance from treatment centres. Finally, studies suggest that cancer-related stigma, influenced by cultural perceptions and beliefs, hinders appropriate disease management by affecting patients' care-seeking behaviour, adherence to treatment and quality of life. Disease-related taboos, such as the stigmatisation of cancer patients, hinder the appropriate management of the disease. (Johnson, S., & Samson, M. 2024) There is a need to develop targeted strategies to raise awareness, improve affordability of care and promote better understanding and social acceptance of the disease.

An in-depth analysis of current cancer control strategies in Algeria highlights several key and critical aspects. First, it is essential that prevention and awareness efforts, including healthy lifestyle campaigns and screening programmes, are fully and thoroughly evaluated to maximise their impact. Secondly, it is essential to improve access to care and treatment, emphasising the absolute need for adequate infrastructure, state-of-the-art equipment and in-depth, specialised training for health professionals involved in the fight against cancer.

Finally, we must not overlook the crucial issue of funding and resources, which must be examined with great rigour and include a consistent budget allocation, sufficient human resources, adequate medical equipment and supplies, and the establishment of solid and sustainable public-private partnerships. This in-depth, rigorous and exhaustive analysis will make it possible to better understand and accurately assess the strengths and weaknesses of current strategies, with the aim of proposing prospects for effective improvement tailored to Algeria's situation in the face of this major challenge.

5. Prospects for improving cancer control policy in Algeria

In order to improve cancer control policy in Algeria, it is essential to strengthen health infrastructures at several levels. Firstly, specialised cancer centres need to be upgraded with modernised diagnostic and treatment equipment. Secondly, it is essential to extend health services throughout the country to ensure equitable access for all citizens. At the same time, the development of prevention and screening needs to be intensified by implementing large-scale awareness campaigns, providing prevention education and facilitating early detection. In addition, improving the collection and analysis of cancer data is essential to target interventions effectively.

- Strengthening healthcare infrastructures

Strengthening Algeria's healthcare infrastructure is essential to significantly improve the care of cancer patients in the country. This includes upgrading and modernising specialist centres in all regions and ensuring that they are equipped with the latest diagnostic and treatment technologies. In addition, it is essential to expand services to ensure equitable access to treatment in all regions of Algeria, particularly in remote and rural areas where access to quality care may be limited. This will involve the construction of new cancer treatment centres, the expansion of existing facilities and the establishment of partnerships with internationally renowned institutions to facilitate the exchange of knowledge and best practices. (WHO, 2023)

Significant investment will also be needed in the recruitment and training of health professionals, including oncology specialists, nurses and qualified laboratory technicians. Raising awareness and educating the population about the early signs of cancer, risk factors and the importance of early detection is another key aspect of this expansion of healthcare infrastructure. Large-scale awareness campaigns are needed to encourage people to visit their doctor regularly and to undergo regular screening.

In conclusion, the development of the healthcare infrastructure in Algeria is an absolute priority for improving cancer control. This will require major investments in the construction of new centres, the expansion of existing facilities, the recruitment and training of health professionals, and awareness and education campaigns to promote equitable access to treatment and early detection. This expansion is a major challenge, but it is essential if we are to guarantee quality care and improve the chances of recovery for cancer patients in Algeria (Grangaud, J. P. 2020).

- Developing prevention and screening:

To strengthen cancer prevention and screening in Algeria, it is essential to launch large-scale awareness campaigns to inform the population about risk factors, early symptoms and preventive behaviour. Prevention education should also be included in school curricula and public health campaigns. At the same time, it is necessary to facilitate early detection by setting up screening centres accessible throughout the country, training health professionals to carry out screenings and reducing financial barriers for at-risk populations.

- Improve data collection and analysis:

To improve the collection and analysis of data on cancer in Algeria, it is essential to establish national cancer registries. These registries will make it possible to collect accurate information on incidence, prevalence, the most common types of cancer, survival rates and other data essential for a better understanding of the situation. At the same time, existing statistics need to be improved to identify trends, regional disparities and the most affected populations, so that interventions can be better targeted. This is essential for guiding cancer control policies and allocating resources appropriately. (Hammouda, D. & Boutekdjiret, L. 2020)

- Strengthening funding and partnerships:

In order to strengthen the fight against cancer in Algeria, it is essential to increase the resources dedicated to this cause. This could mean increasing the budget allocated to cancer screening, treatment and research. In addition, the development of international and public-private partnerships could enable the sharing of knowledge, resources and technologies, while promoting more effective prevention and awareness programmes. These partnerships could also help to improve healthcare infrastructure and access to treatment for cancer patients in Algeria (Chan, L. & Dewart, G. 2023).

Conclusions and recommendations

In conclusion, Algeria's cancer control policy faces a number of challenges, particularly in terms of health infrastructure, access to care and the collection of reliable data. In order to meet these challenges, it is essential to strengthen specialised centres, extend the range of services available throughout the country, carry out awareness and screening campaigns and improve the collection of data on cancer. It is also necessary to increase the budget allocated to the fight against cancer and to strengthen the various partnerships. There is therefore an urgent need for a comprehensive, coordinated strategy to tackle the growing cancer epidemic in Algeria.

In view of the alarming increase in the number of cases, it is imperative that a comprehensive, well-coordinated strategy be put in place rapidly to combat this epidemic. There is an urgent need to focus on prevention, early detection and access to quality care. Raising public awareness and collaboration between public health actors, international organisations and private partners are essential to address this public health challenge. It is also crucial to invest in strengthening health infrastructures, developing research and improving data collection to better understand and combat cancer in Algeria.

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