

PREVENTION AND CONTROL OF CHRONIC DISEASES IN VULNERABLE POPULATIONS: APPROACHES IN FAMILY MEDICINE

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Abstract: Chronic diseases such as diabetes, hypertension and cardiovascular diseases are prevalent in vulnerable populations, who often face difficulties in accessing adequate medical care. Primary care, especially family medicine, plays a central role in the prevention and control of these diseases, as it offers continuous, comprehensive and personalized care, focused on health promotion and the prevention of complications. This model of care is especially effective in communities that face economic, social and cultural barriers, allowing for early intervention and appropriate management of chronic conditions. The aim of this study is to analyze strategies for the prevention and control of chronic diseases in vulnerable populations, with a focus on family medicine. The aim is to identify effective approaches that can be used to improve the quality of life of these populations and reduce the incidence and progression of chronic diseases. The research was carried out through a qualitative literature review, focusing on articles published between 2017 and 2022. The aim was to explore the advances and challenges in the management of chronic diseases, with an emphasis on primary health practices, the impact of social determinants of health, and the role of technologies such as telemedicine in the management of these conditions. By providing continuous and comprehensive care, family medicine uses various strategies to prevent and control chronic diseases. These include regular patient follow-up, early screening for conditions such as hypertension and diabetes, and health education, which guides individuals on healthy behaviors and self-care. In addition, disease monitoring programs and interventions such as modifying eating habits and promoting physical activity have shown positive results in the management of chronic diseases. However, there are still significant challenges, such as the scarcity of resources and the lack of qualified professionals, which limit the effectiveness of these approaches in certain regions and social groups. Overcoming these barriers requires a joint effort between health professionals, managers and public policies. It is concluded that family medicine is a fundamental approach to the control and prevention of chronic diseases, especially in vulnerable

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populations. The strategies adopted in this model of care, such as continuous monitoring, health education and early intervention, have shown significant results in improving quality of life and reducing complications associated with chronic diseases. However, in order to optimize the results, it is necessary to overcome challenges related to access and the training of professionals, as well as ensuring adequate support for the implementation of public health programs that favour the population in situations of vulnerability. Implementing efficient public policies and expanding access to primary health care are essential to achieving effective control of chronic diseases.

Keywords: Chronic Diseases; Social Vulnerability; Family and Community Health.

INTRODUCTION

The prevention and control of chronic non-communicable diseases (NCDs), such as diabetes, high blood pressure, and cardiovascular diseases, are priority issues for health systems globally, especially when it comes to vulnerable populations. These populations include people who face financial difficulties, language and cultural barriers, or live in remote areas with limited access to medical care. The World Health Organization (WHO) highlights that NCDs account for more than 70% of annual deaths worldwide, with a disproportionate impact on marginalized communities, requiring tailored interventions that take into account social inequalities (WHO, 2022).

In the context of Primary Health Care (PHC), Family Medicine emerges as a crucial component in the management of NCDs. This model of care is based on principles of continuity, comprehensiveness, and coordination of care, offering a holistic approach that addresses not only medical conditions but also social determinants of health. Studies indicate that the presence of family physicians is associated with better clinical outcomes in patients with NCDs, especially when care is organized around the family and community. This is particularly important in vulnerable communities, where the connection between patients and health professionals must be strong and grounded in mutual trust for treatment strategies to be effective (Pinto et al., 2018).



In addition to the importance of the Family Medicine model, it is essential to consider the structural barriers faced by vulnerable populations. Factors such as food insecurity, inadequate housing, low levels of health literacy, and social stigma can affect an individual's ability to manage their chronic conditions effectively. Recent research indicates that strategies that go beyond conventional clinical care, such as community engagement programs and interventions that promote access to necessary resources, have a positive impact on the management of NCDs. In addition, cross-sectoral collaboration between health, education, and social services has shown to be a promising avenue for addressing the complexities of the social context affecting health (Marmot and Allen, 2020).

Technology has also played a significant role in increasing the reach and effectiveness of chronic disease prevention and control. Telemedicine, for example, has been shown to be an effective tool in overcoming geographical barriers, especially during and after the COVID-19 pandemic. Mobile applications that monitor the patient's health status, such as blood glucose control in diabetics or blood pressure measurement, have facilitated self-care and health education. However, for these technologies to be effective, inclusive design is needed that considers the technological limitations of vulnerable populations, ensuring that all patients can benefit from these innovations (Bauer et al., 2017).

Therefore, the analysis of the prevention and control of NCDs in vulnerable populations from the perspective of Family Medicine is essential to move towards a more equitable and sustainable health system. The integration of community-based approaches, effective public policies, and technological innovations, coupled with a deep understanding of patients' social and cultural needs, is essential to mitigate the impacts of NCDs and promote a better quality of life for these communities (Smith, Thomas, and Lee, 2020).

The objective of this study is to analyze the strategies for the prevention and control of chronic diseases in vulnerable populations, with a focus on the performance of family medicine. It seeks to identify effective approaches that can be used to improve the quality of life of these populations and reduce the incidence and progression of chronic diseases.



MATERIALS AND METHODS

The research was carried out through a qualitative literature review, focusing on articles published between 2017 and 2022. The objective was to explore the advances and challenges in the management of chronic diseases, with an emphasis on primary health practices, the impact of social determinants of health, and the role of technologies such as telemedicine in the management of these conditions.

Inclusion Criteria:

- Peer-reviewed articles published between 2017 and 2022.
- Studies that address the management of chronic diseases in contexts of vulnerable populations.
- Articles that discuss the impact of social determinants of health, the implementation of public policies for the prevention of chronic diseases, and the use of health technologies such as telemedicine and mHealth.

Exclusion Criteria:

- Studies that do not directly address chronic diseases or that focus on acute conditions.
- Papers without peer review or publications in journals with a low impact factor.
- Articles that do not provide data or analysis on the management of chronic diseases in vulnerable populations or on the use of technologies in the context of health.

Search Strategy and Boolean Markers:

- AND: to associate related topics (e.g., “chronic disease management” AND “telemedicine”).
- OR: to cover synonymous terms (e.g., “social determinants” OR “health equity”).



- NOT: to exclude irrelevant topics (e.g. “acute diseases” NOT “chronic conditions”).

Guiding Question:

- What are the challenges and opportunities in the management of chronic diseases in vulnerable populations, considering the social determinants of health and the integration of technologies such as telemedicine?

THEORETICAL FOUNDATION

Approaches in Family Medicine involve a detailed analysis of primary care strategies and their ability to directly impact the management of chronic diseases, in addition to considering the social determinants and inequalities that interfere with treatment adherence. Family Medicine, as a patient-centered care model and continuous bond with the health team, is one of the most effective approaches in preventing chronic diseases and reducing their complications in the long term. The literature has shown that, by offering comprehensive and accessible care, with a focus on health promotion and prevention, Family Medicine can significantly reduce morbidity and mortality rates in vulnerable populations (Pereira et al., 2021).

Primary Health Care (PHC), within this context, is a strategy that aims at the early approach of health conditions, especially chronic non-communicable diseases (NCDs), such as diabetes mellitus, hypertension, chronic respiratory diseases, among others. Through regular consultations and ongoing follow-up, Family Medicine professionals can detect early signs of chronic diseases and implement preventive interventions. In addition, they play an essential role in educating patients, promoting adherence to treatment, and advising on lifestyle changes, such as healthy eating, regular physical exercise, and stress management. The personalized approach that Family Medicine offers allows health professionals to build a care plan tailored to the individual needs of each patient, taking into account their socioeconomic, cultural, and psychological conditions (Browne et al., 2019).



However, vulnerable populations face a number of barriers that make it difficult to control their health conditions. As a result, poverty, lack of access to quality health services, low education, and food insecurity are factors that contribute to the high prevalence of chronic diseases among these populations. Accessibility to care and knowledge about health conditions are directly affected by these social determinants. Studies reveal that adherence to treatment for chronic diseases is often low among vulnerable populations due to difficulty in accessing medicines, medical appointments, and often lack of trust in the health system. Therefore, the integration of interdisciplinary actions and attention focused on the social determinants of health are fundamental for the effectiveness of chronic disease control in these communities (Costa et al., 2021).

In this scenario, Family Medicine needs to go beyond conventional consultations and offer continuous support. Strategies involving the use of community health agents, who act as a link between families and health services, have been shown to be effective in promoting health in vulnerable communities. The active participation of these professionals, who know people's living conditions closely, helps in the early identification of risks and in continuous education about the importance of self-care and adherence to treatment. Thus, the work of community agents has been essential in the implementation of chronic disease prevention programs, especially in peripheral or rural areas, where access to doctors and hospitals is limited. In addition, these professionals play a crucial role in reducing the stigma associated with chronic diseases, such as diabetes and hypertension, which are often seen as disabling and difficult to treat (Silva et al., 2021).

In addition, the implementation of digital technologies, such as mobile applications and remote monitoring of chronic conditions, can expand the reach of care provided in Primary Health Care. During the COVID-19 pandemic, telehealth and the use of mobile devices have become indispensable tools for monitoring patients with chronic diseases. The use of technologies such as these devices allows patients in distant areas or in vulnerable situations to have constant access to health professionals, even without the need for face-to-face consultations. However, for these tools to be effective, it is essential that the population has access to technologies and that there is a digital



inclusion strategy to overcome barriers such as the low level of digital literacy. The combination of mobile technologies with the performance of family health teams can ensure broader and more efficient coverage in the management of chronic diseases, providing patients with continuous and personalized follow-up (Fernandes et al., 2020).

The integration of prevention strategies with the treatment of chronic diseases in vulnerable populations also depends on the creation of public policies that promote health equity. Public health initiatives that promote healthy eating, physical exercise, and self-care education are essential to reduce the impacts of chronic diseases. In this sense, the implementation of policies that guarantee access to medicines, routine exams, and basic health care are essential to improve the quality of life of vulnerable populations and, consequently, control the advance of chronic diseases. Such policies should be supported by a continuum of care approach, in which PHC, through its professionals, serves as a gateway to the health system and as a care coordinator in several other areas (Pereira et al., 2021).

Therefore, the prevention and control of chronic diseases in vulnerable populations require a joint effort involving health professionals, effective public policies, and community mobilization. Family Medicine plays a central role in this process, not only because of its ability to identify and treat chronic conditions, but also because of its role in health promotion and prevention, especially when working in an integrated way with the community (Marmot and Allen, 2020).

CONCLUSION

Therefore, the prevention and control of chronic diseases in vulnerable populations are complex challenges, which require an integrated approach focused on the specific needs of these groups. Family Medicine, with its focus on continuous and personalized care, emerges as an effective strategy to address these challenges by offering affordable and quality primary care. The combination of regular medical care, health education, and social support are key to reducing disparities in the treatment of chronic diseases among vulnerable populations.



Although socioeconomic barriers, such as lack of access to health services, medicines, and adequate information, are still a considerable obstacle, the work of community health agents and the use of digital technologies can complement traditional strategies, expanding the reach and effectiveness of treatment. The support of public policies that ensure equity in access to health and promote the integration of care is crucial for interventions to be sustainable and effective in the long term.

Therefore, by focusing on prevention, education, and continuous care strategies, Family Medicine has the potential to transform the management of chronic diseases in vulnerable populations, not only improving the quality of life of patients, but also contributing to the reduction of the burden of chronic diseases in the health system. The implementation of public policies aimed at expanding access and promoting health is an essential step to ensure that the benefits of this care model reach all segments of the population.

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