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Confronting Inequality in Health: Tackling Diabetes and Hypertension in Mexico's Landscape of Socioeconomic Disparities

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Abstract

Diabetes and hypertension are two leading causes of death in Mexico and contribute with an important economic cost for the health system. These diseases are unequally distributed in the population, being more prevalent in less educated people and in those living in low-income households. Notably, a substantial proportion of individuals with diabetes or hypertension lack diagnosis or struggle with inadequate disease control. Therefore, there is an urgent need to improve disease detection and to provide treatment through equitable health care access.

Keywords: Hypertension; Diabetes; Mexico; Health care; Social determinants of health

Introduction

Diabetes mellitus and hypertension represent two of the most significant public health challenges in modern-day Mexico. The intricate relationship between these conditions and social determinants of health is starkly evident in the latest findings from the Mexican National Health and Nutrition Survey (ENSANUT) 2022 [1] and the Global Burden of Disease (GBD) 2019 [2]. ENSANUT sheds light on a worrisome landscape, as diabetes reached a national prevalence of 18.3% in 2022, with a third of those Mexicans remaining unaware of their condition [1]. The situation for hypertension is equally concerning, with a self-reported prevalence of 15.9%, coupled with an alarming 31.9% of individuals unaware of their hypertensive condition [1,3]. This means that nearly half of the Mexican population, 47.8%, is grappling with elevated blood pressure levels.

The prevalence of diabetes exhibits a steep gradient across educational levels; notably higher among individuals without formal education, standing at 20.7%, compared to a lower 9.3% in those with higher education. The pattern is similar for hypertension, where diagnosed hypertension is more prevalent among those without formal education at 31.3% versus 13.5% among the educated. This disparity extends to employment status as well, with hypertension prevalence reaching 24.1% among the unemployed, in stark contrast to the 11% among their employed counterparts. Similarly, a striking gradient in prevalence also emerges when household income levels are considered, with a general prevalence of 24.9% in households reporting no income in the past month, gradually decreasing to 12.1% in the highest income segment. Interestingly, the uninsured population shows a lower prevalence of hypertension (13%) compared to those with social security (18.2%), possibly reflecting greater diagnostic accessibility among those without formal healthcare coverage. Notably, the proportion of Mexicans in this situation rose from 16.2% to 39.1% between 2018 and 2022, which represents a change from 20.1 to 50.4 million individuals lacking access to healthcare services, respectively [4].

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Despite the widespread reported access to diabetes treatments (86.70%), control rates based on glycosylated hemoglobin remain disturbingly low at 36.1% [5]. In the case of hypertension, access to treatment stands at 82.3%, but control is only achieved for a meager 33.7%, with even lower rates among individuals without income and belonging to vulnerable households [1]. The GBD 2019 provides a broader context to these findings. Diabetes in Mexico resulted in 59.1 deaths per 100,000 people of all ages in 2019, marking an 88.7% increase since 1990 [2]. When age-standardized, the death rate is 65.41 per 100,000 in 2019 versus 65.85% in 1990, indicating a slight reduction of 0.67% over a period of 29 years [2]. Furthermore, diabetes emerges as the leading cause of age-standardized Years Lived with Disability (927.59 YLDs per 100,000) and tops the list for Disability Adjusted Life Years (DALYs) with 2,328.32 per 100,000 [2]. The impact of hypertension is no less severe, as it caused 118.4 deaths per 100,000 in 2019, positioning itself as a major metabolic risk factor. The condition contributed to 2,200.88 Years of Life Lost per 100,000 on a national scale, thereby highlighting its significant impact on mortality. The total DALYs attributed to hypertension amounted to 2,455.8 per 100,000, placing it in a concerning position in the national health landscape [2]. The mortality and morbidity data reflect a profound gap in awareness and diagnosis for diabetes and hypertension in Mexico, leading to a high number of individuals remaining undiagnosed and therefore uncontrolled. This gap underscores the urgent need for more effective public health strategies, improvements to medical practice, and patient education to improve self-management. While lifestyle changes are crucial, the effectiveness of medications, when properly prescribed and adhered to, is evident. Increased access to antihypertensives and diabetes medications could prevent costly and life-threatening complications, such as short-term renal damage.

Conclusion

Findings from ENSANUT 2022 and GBD 2019, call for a strategic reevaluation of the healthcare service delivery model for diabetes and hypertension in Mexico. A comprehensive approach that acknowledges and tackles social determinants of health is crucial. This involves implementing socioeconomic interventions, educational campaigns, and enhancing healthcare access. Policies must be tailored to bridge the gap between different socioeconomic groups, ensuring that prevention, detection, and management of diabetes and hypertension are equitable and accessible to all. The high rates of undiagnosed diabetes and hypertension, coupled with alarmingly low control rates –– even among those with access to medication –– demand a shift toward a more holistic healthcare strategy with a patient centered approach that addresses socioeconomic barriers to effective disease control throughout the whole continuum of care [6]. The WHO in its Resolution WHA69.24 Strengthening integrated, people-centred health services establishes that in order to achieve the long-awaited universal health coverage, health systems must reorient their care models, ensuring coordination among various services, strengthening governance and accountability, and fostering an enabling environment. Crucially, empowering and engaging people remains a key element [7]. Without putting patients at the center and starting at the primary health care level, we will continue to witness persistent gaps in diagnosis, which are likely to exacerbate the challenge of controlling diabetes and hypertension among Mexicans [8]. On the other hand, recent initiatives using recommended systems and artificial intelligence in primary care for better diagnosis and treatment of these conditions are steps in the right direction, but barriers to scalable adoption must be considered [9]. The observed disparities suggest that disadvantaged groups might face severe complications or crises due to late diagnosis. Therefore, the high prevalence of complications and mortality among undiagnosed individuals with diabetes and hypertension underscores the urgent need for improved detection and a more equitable healthcare strategy in Mexico. While much more empirical work is needed, investments aimed at reducing socioeconomic disparities are expected to improve overall welfare, given that individuals with low income and no insurance share a disproportionate burden of morbidity and mortality related to diabetes and hypertension.

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