



Cardiovascular prevention at a crossroads: from population-based strategies to precision medicine

La prevención cardiovascular en una encrucijada: de las estrategias poblacionales a la medicina de precisión

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Cardiovascular disease remains the leading cause of mortality worldwide and continues to impose a disproportionate burden in low- and middle-income countries. In Mexico, the convergence of early-onset cardiometabolic disease, a high prevalence of obesity and diabetes, and limited access to preventive strategies has created a scenario in which atherosclerotic cardiovascular disease frequently manifests at younger ages and with greater severity.

For decades, cardiovascular prevention has relied on population-based strategies targeting traditional risk factors. While these approaches have led to meaningful reductions in cardiovascular mortality in high-income countries, their impact has been more limited in regions characterized by early and sustained exposure to cardiometabolic risk.

We are now witnessing a paradigm shift in cardiovascular prevention—one that integrates scalable public health interventions with individualized risk assessment. This dual approach is reflected in the two complementary consensus documents presented in this issue.

The first focuses on cardiovascular immunization, highlighting the role of vaccination—particularly against influenza—as a cost-effective, scalable, and underutilized strategy to reduce cardiovascular events. This

approach bridges infectious disease prevention and cardiovascular care, reinforcing the concept that inflammation and infection are integral components of atherothrombotic risk.

The second consensus addresses the integration of polygenic risk scores into cardiovascular risk stratification. By capturing inherited susceptibility from early life, polygenic risk introduces a novel dimension into risk assessment, enabling the identification of individuals whose lifetime risk is not adequately reflected by traditional models.

Together, these two approaches—population-based prevention and precision medicine—should not be viewed as competing paradigms, but rather as complementary strategies within a unified framework of cardiovascular prevention.

In settings such as Mexico, where both high disease burden and resource constraints coexist, the challenge is not only to generate evidence, but also to implement it effectively. Structured initiatives such as the proposed PRS-MX registry represent an important step toward bridging the gap between innovation and real-world clinical practice.

The future of cardiovascular prevention will depend on our ability to integrate early identification of biological risk with scalable interventions that can be applied at the population level. Achieving this balance

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will require collaboration across disciplines, institutions, and healthcare systems.

This supplement reflects a coordinated effort to redefine cardiovascular prevention through the integration of population-based and precision medicine strategies.

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