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VIEWPOINT

Women's Cardiovascular Prevention in Asia

A Stress Test for Global Health

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Across Asia, annual cardiovascular deaths are projected to reach approximately 24.1 million by 2050, an increase of 91% vs 2025 despite declining age-standardized rates. The steepest crude increases are expected in East Asia (+147%), South Asia (+85%), and Southeast Asia (+82%), with a slower rise in Central Asia (+13%).[1] This is the real stress test for global health. Health systems will continue to underperform at scale, especially if prevention pathways are not redesigned for women. On the current trajectory, women remain too often invisible in data systems and underserved along care pathways. The consequences are measurable: delayed diagnoses, unequal access to effective prevention, and lower participation in clinical research. These weaknesses, in turn, feed into models and guidelines that are not effective for women, creating a vicious cycle of invisibility and ineffectiveness.

This is not only an equity issue; it is a test of scientific quality and system performance. When half the population is sidelined in risk estimation and trial representation, the outputs of science, risk scores, thresholds, and treatment recommendations carry systematic bias. Addressing gender gaps in Asia's cardiovascular prevention, therefore, functions as a stress test for global health: it reveals blind spots in how we measure, finance, and deliver prevention, and it pressures institutions to translate "sex-aware" recommendations into routine practice.

Primary prevention offers the highest returns, provided tools are calibrated to real risk and to local systems. The launch of the SCORE2 Asia-Pacific (Systematic COronary Risk Evaluation 2 Asia-Pacific) model, derived from regional cohorts and explicitly differentiated by sex, is an important advance. It enables more accurate stratification of apparently healthy women and supports targeted deployment of lifestyle support, lipid-lowering agents, and antihypertensives.[2] Yet risk scores alone are not enough. Translation into real-world benefit hinges on removing economic, linguistic, and cultural barriers that suppress screening, adherence, and follow-up, and on addressing social determinants, socioeconomic position, migration/nativity, neighborhood environments, food access, and care access that shape both risk and the ability to benefit from prevention.[3] Female-specific risk modifiers remain poorly integrated into routine practice. Hypertensive disorders of pregnancy, gestational diabetes, preterm delivery, premature menopause, and polycystic ovary syndrome leave durable biological imprints that elevate later-life cardiovascular risk, yet they are rarely recorded in ways that trigger long-term surveillance or tailored interventions.[4] Persisting with a "neutral" (male-default) approach guarantees systematic disadvantage for women because it ignores pathophysiology, timing, and life-course dynamics that are distinctively female.

The gap extends to secondary prevention. After acute cardiovascular events, Asian women less frequently receive full-dose guideline-directed therapies, are referred to cardiac rehabilitation less often, and achieve blood pressure and lipid targets less consistently.[5] Pathways of care are often less intensive, and adherence is more fragile, patterns driven by out-of-pocket costs, caregiving burdens, and practical obstacles such as travel time and language

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barriers. International roadmaps have already identified feasible levers: reimbursement and availability of essential therapies, accessible rehabilitation pathways (including home-based and hybrid models), culturally tailored health literacy, regimen simplification such as fixed-dose combinations, proactive adherence monitoring, and structured follow-up.[6] Implementing these strategies in Asian health systems is not merely an act of gender equity; it is a prerequisite for clinical effectiveness at scale.

A cautionary mirror is visible in Europe. EUROASPIRE (European Action on Secondary and Primary Prevention by Intervention to Reduce Events) surveys show that, among patients with coronary disease, risk-factor control remains worse in women than in men, with wide cross-country variation and a pronounced socioeconomic gradient.[7] The implication is clear: mechanisms that disadvantage women in Asian settings are not distant or exotic; they are the same fault lines present in European systems. Without intentional redesign, these gaps persist even in high-income contexts.

Clinical research is a persistent bottleneck. Across many cardiovascular trials, women are underrepresented relative to disease prevalence.[8] The consequences are especially salient in conditions that disproportionately affect women, such as heart failure with preserved ejection fraction. Sex-specific differences in pathophysiology, diagnosis, and therapeutic response argue for inclusive study designs, sex-adapted diagnostic thresholds, and endpoints that reflect outcomes meaningful to women.[9] Underenrollment begets uncertainty and therapeutic drift, which feeds back into guidelines and reimbursement decisions that may be less effective for female patients. In autoimmune conditions with high female prevalence such as Sjögren's syndrome, cardiopulmonary phenotypes also show sex-related differences, underscoring the need for dedicated surveillance pathways and accurate diagnostic criteria.[10]

An actionable agenda consists of a coherent suite of practical levers that Asian health systems can readily adopt, while concurrently strengthening prevention at the population level. Examples include the following:

1. Recalibrate risk and revisit timing. SCORE2 Asia-Pacific is a better starting point, but risk is not static for women: it changes across hormonal transitions. Prevention pathways should include automatic re-assessment at key life stages, preconception counseling, postpartum reviews after complicated pregnancies, perimenopause, and early post-menopause. Electronic health records and primary-care checklists can prompt these reviews so that pregnancy history and early menopause are not lost to follow-up.
2. Remove affordability barriers that erode adherence. The World Heart Federation roadmap emphasizes a small set of essential drugs and services that should be accessible without catastrophic spending.[6] In practice: public procurement of generics, zero- or low-copay policies for secondary-prevention bundles, and performance indicators tied to persistence rather than mere prescription. Fixed-dose combinations can reduce pill burden and clinic visits when paired with counseling and simplified follow-up.
3. Widen the front door to rehabilitation. Women are less frequently referred and less likely to attend center-based programs because of time, distance, and caregiving constraints.[5] Offering home-based or hybrid cardiac rehabilitation, with digital monitoring and coaching, can close this gap, provided programs are language-concordant and culturally tailored. Community health workers and peer groups can amplify adherence when trained to deliver brief interventions and reinforce goals.
4. Measure what matters and close feedback loops. Dashboards that display sex-disaggregated measures, referrals to rehabilitation, attainment of low-density lipoprotein cholesterol and blood-pressure targets, persistence on indicated therapies, and re-admissions, make inequities visible and correctable. Indicators should be published and stratified by geography and socioeconomic status to create accountability and to identify exemplars that can be scaled.

Finally, build workforce capability and communicate differently. Clinicians, nurses, midwives, and community health workers need practical training in sex-specific prevention: how to take an obstetric-gynecologic cardiovascular history efficiently, how to counsel around pregnancy-related risk, how to tailor statins and antihypertensives across the life course, and how to recognize and manage ischemia with nonobstructive coronary arteries and heart failure with preserved ejection fraction.[9] Communication should be concrete (absolute risk reductions, practical next steps), supportive rather than moralizing, and delivered in settings women already use, from maternal-child health clinics to workplaces.

This agenda is ambitious but feasible. It does not require novel technologies so much as disciplined implementation of what is already recommended.

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Demographic change defines the urgency.[1] A calibrated risk tool identifies an entry point. Evidence on social determinants provides operational prerequisites.[3] Women-specific risk factors supply the clinical rationale.[4] The persistent gender gap in secondary-prevention outcomes warns that without intentional redesign, implementation will replicate inequality rather than resolve it.[7]

Cardiovascular prevention in Asian women is not a peripheral topic but a stress test for global health. If systems reorganize around sex-specific risk, equitable access to essential therapies, inclusive research, and social determinant informed delivery, outcomes will improve for women and, because these reforms strengthen the scaffolding of prevention as a whole, for men as well. Equity is not a detour from effectiveness; it is the shortest path toward it.

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