Letter to Editor

Highlights from the manifesto on Early Detection and Diagnosis of Cardiovascular Disease: The Role of Laboratory Tests and Emerging Technologies

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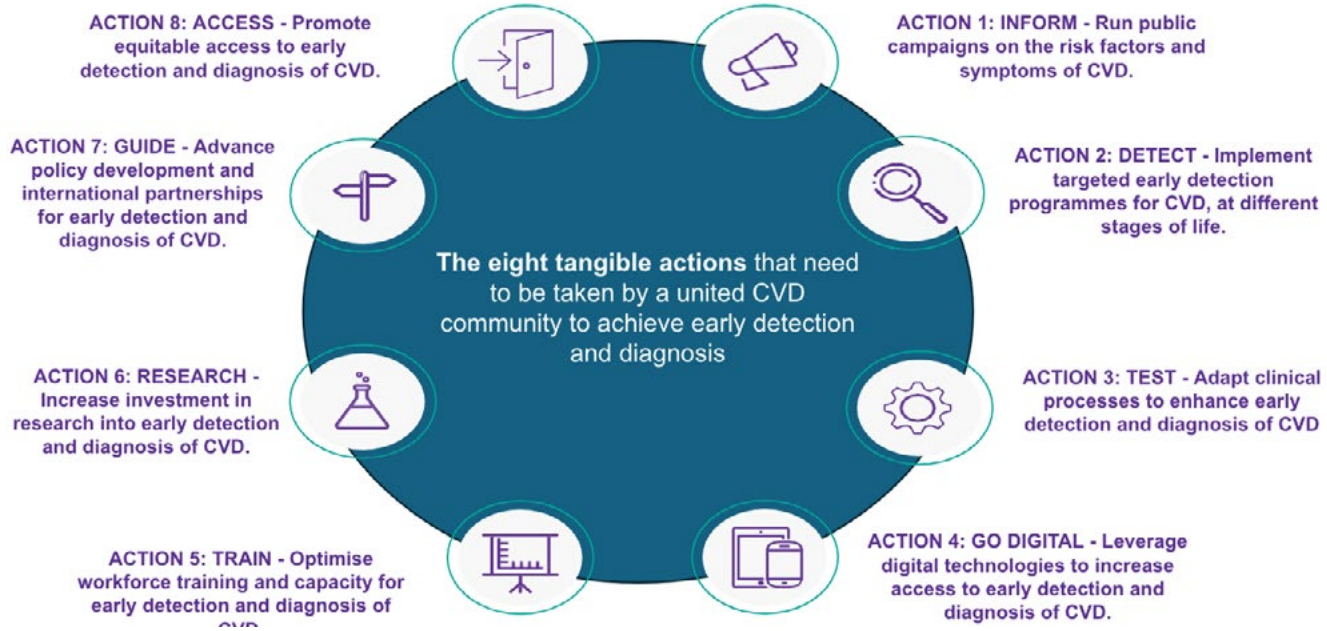
Cardiovascular disease (CVD) remains the leading cause of mortality globally, accounting for over 30% of all deaths annually, with projections indicating a rise in CVD-related deaths by more than 60% between 2020 and 2050 [1,2]. Despite significant advancements in treatment, the early detection and diagnosis of CVD are crucial to improving patient outcomes and reducing the socioeconomic burden of the disease. The recently developed manifesto by the Global Heart Hub outlines eight actionable strategies to enhance the early detection and diagnosis of CVD. These eight actionable strategies are summarized in Figure 1.

Figure 1: Eight actionable strategies are summarized.



The eight tangible actions that need to be taken by a united CVD community to achieve early detection and diagnosis. These actions are taken from the GHH manifesto.

This article aims to summarize the key messages of the manifesto, emphasizing the expectations from laboratory tests and emerging technologies [2]. One of the unique features of this manifesto is that it was patient-led, global, and developed in collaboration with key stakeholders, with many contributors. These aspects highlight the importance of the messages shared.

Public Awareness and Targeted Detection

Inform

Public campaigns are essential to educate individuals about the risk factors and symptoms of CVD. These campaigns should be culturally tailored and leverage diverse media to reach a broad audience, empowering individuals to monitor their cardiovascular health and seek timely medical advice [2].

Detect

Implementing targeted early detection programs at different life stages is critical. These programs should identify high-risk individuals through biomarker testing, clinical support tools, and consideration of genetic, metabolic, and lifestyle risk factors. Collaboration with patient organizations and health authorities is necessary to adapt these programs locally [2].

Enhancing Clinical Processes and Digital Integration

Test

Enhancing clinical processes to facilitate early detection and diagnosis of CVD includes increasing access to rapid, point-of-care testing (POCT) in primary care and community settings. Redesigning patient care pathways to ensure thorough investigation of potential cardiac symptoms and underlying causes is paramount [2].

Opportunities and Challenges with POCT

Optimize

While POCT may face skepticism from the community due to concerns about accuracy and reliability, it presents significant opportunities. POCT allows for immediate results, enabling quicker decision-making and treatment initiation. This is particularly beneficial in rural or underserved areas where access to centralized laboratories is limited. The convenience and rapid turnaround time of POCT can lead to better patient adherence and engagement in their healthcare [3,4]. Furthermore, the improvement of the performances of POCT tests over last years is significant.

Implications of Seeking Reimbursement for Biomarker Testing and New Technologies

Incentivize

Securing reimbursement for biomarker testing and emerging technologies is crucial for their widespread adoption. Reimbursement policies that support the cost of NP testing can improve access to these critical diagnostic tools, particularly in primary care settings. In regions where NP testing is reimbursed, there is higher utilization, leading to earlier detection and improved patient outcomes. Policymakers must design reimbursement strategies that incentivize high-quality, patient-centered care, promoting the adoption of innovative diagnostic technologies [3,4].

Task Shifting
Expanding Roles of Healthcare Professionals

Reallocate

Expanded Remit of Healthcare Professionals
The concept of task shifting involves reallocating certain tasks from healthcare providers to other trained professionals, such as general practitioners, nurses, pharmacists and other groups of health care professionals. By performing POCT and initial screenings, these healthcare professionals can identify patients who need further evaluation by a physician, thus reducing the diagnostic burden on doctors and specialists. This approach not only optimizes the use of available resources but also ensures that patients receive timely care. To ensure competency, clinical laboratory professionals must certify healthcare professionals involved in diagnostic testing as competent. This certification process should include rigorous training and continuous education to keep pace with advancements in diagnostic methods. By doing so, we can maintain high standards of care and ensure the reliability and accuracy of test results [3].

Multidisciplinary Team Approach

Collaborate
The laboratory community is integral to a multidisciplinary team approach. Specialists in laboratory medicine, clinicians, and other healthcare professionals must collaborate to define clinical needs and interpret test results and develop comprehensive care plans. This collaboration ensures that patients receive accurate diagnoses and appropriate treatments in a timely manner [4].

Promoting Research and Rapid Patient Profiling
Enhance

Role in Research
The laboratory community plays a pivotal role in promoting research and developing rapid patient profiling tools. By participating in research initiatives and clinical trials, laboratories can contribute to the discovery of new biomarkers and diagnostic methods. Rapid patient profiling tools developed through such research can provide real-time insights into a patient's health status, facilitating personalized treatment plans [3,5].

Implications for the Laboratory Community

Invest
The adoption of new diagnostic technologies and the expansion of specialist in laboratory medicine roles have significant implications for the laboratory community. Continuous education and training are necessary to keep pace with advancements in diagnostic methods. Laboratories must also invest in state-of-the-art equipment and maintain rigorous quality control standards to ensure the accuracy and reliability of test results [4,5].

Conclusion
The manifesto for early detection and diagnosis of CVD outlines a comprehensive approach involving public awareness, targeted detection programs, enhanced clinical processes, digital integration, workforce training, research investment, policy development, and equitable access. Specialists in laboratory medicine and laboratory tests, particularly NP testing, and emerging technologies play a critical role in achieving these goals. By implementing these strategies, we can significantly reduce the burden of CVD, improve patient outcomes, and foster economic resilience and public health globally.

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