

# Public Health Interventions to Prevent Cardiovascular diseases are based on Epidemiology: Translational Research's Function

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## Abstract

The state of CVD prevention public health interventions was looked at to figure out what needs to be done to close the gap between policy and evidence. We evaluated translational research using a two-step framework. The current state of CVD prevention and control at the national level in India was documented through a review of the relevant literature. To comprehend various aspects of translational research, case studies of risk factor surveillance, tobacco control, and blood pressure measurement were used. India has recently seen initiatives at the national level to monitor, prevent, and control non-communicable diseases. The majority of the delays in translating research into policy have occurred at. These could have been the reasons: policymakers and program managers' inaccurate perception of the issue, a lack of global public health guidelines and tools, and insufficient nationally relevant research on the operationalization and cost of public health interventions are all contributing factors. Institutional mechanisms to improve human resource capacity to initiate and monitor translational research in India must be established by the public health community, both nationally and internationally. A greater public interest necessitates that translation barriers at the community level be overcome. Over a billion Indians will benefit from the extraordinary scientific advancements of this century only if this is the case.

**Keywords:** Cardiovascular diseases; Public health interventions; Translational research

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## Introduction

Effective translation of new knowledge mechanisms and techniques generated by advances in basic science research into new approaches for disease prevention, diagnosis, and treatment has been defined as translational research [1]. The term "someone who takes something from basic research to a patient and measures an endpoint in a patient" has been used to describe a translational researcher. Traditional definitions of translational research have been narrow. However, in recent years, a distinction has been made between a second type of translational research that aims to close treatment gaps and improve quality by reorganizing, coordinating, and improving access to care systems [2]. The actual invention or discovery and its validation by other

researchers are the focus of this phase before it is accepted as evidence. Basic science researchers are the actors in this phase, and pharmaceutical or biotechnology companies provide the majority of the funding. Numerous developed nations also have initiatives funded by the government. Acceptability: When the discovery is put to use in a clinical setting, the second phase begins. Professional bodies form expert groups to develop or modify the guidelines through the use of meta-analysis and consensus development, whereas individual clinicians would initiate the process [3]. Pharmaceutical companies provide the majority of funding for clinical trials, and professional bodies typically oversee the development of guidelines, which are frequently funded indirectly by biotechnology and pharmaceutical companies. Application When an accepted clinical practice attempts to be

incorporated into a national level policy, plan, or program, the third phase of translational research begins. Since health service or operational research would be required to determine its viability for a large-scale program, it must be included in the public health research agenda. During this phase, appropriate economic analyses and advocacy are required to persuade policymakers of its cost-effectiveness. This endeavour typically receives funding from governments and multilateral development agencies [4].

### Public health interventions in India for the prevention of cardiovascular disease

The surveillance, prevention, and control aspects of the CVD program are essential public health functions. The following is a discussion of the three components' current status: Mortality, morbidity, and risk factors are the three levels at which CVD surveillance takes place [5]. In India, death causes surveillance has only recently increased<sup>18</sup>. Despite the existence of sporadic disease surveys, there is no systematic method for tracking diseases. This is probably due to the complexity of such an endeavour. Risk factor surveillance has also been the focus of global surveillance [6]. The Framework Convention on the Control of Tobacco (FCTC) was ratified by India on and a Tobacco Control Legislation has been enacted. In order to provide consumers with healthier options, modifications to the Prevention of Food Adulteration Act are underway to require the labelling of the quantity and type of nutrients in processed and packaged foods. The National Program for the Prevention and Control of Diabetes, Cardiovascular Disease, and Stroke, which began as a pilot program in nine districts in January, is anticipated to soon reach the entire nation [7].

### Knowing what factors affect the success gap in translation

It is concluded that crucial missing elements at the national level include: guidelines for the participation of non-health sectors, as well as diet and physical activity guidelines, mechanisms for sensitizing policymakers, and standard disease management guidelines [8]. Despite the fact that the issues are comparable, with the exception of the perception that alcohol use is more of a social issue than a health issue, alcohol control has not been successful in contrast to the success achieved with tobacco. The presence of persistent translation gaps indicates the involvement of powerful industries and lobbies in the formulation of programs and policies. Since the 1970s, it has been well established that

risk factors play a role in CVD [9]. Although it has been a well-established clinical practice to monitor risk factor levels as part of management, it has not been included in public health surveillance until recently. In the United States, behavioural risk factor surveillance (BRFS) is used. The Steps approach's global tool was only developed in by the World Health Organization (WHO). As part of the National Integrated Disease Surveillance Program in, the Indian government established NCD risk factor surveillance. This protocol was modified and pilot tested in six Indian locations during the interim. The lack of standard procedures, guidelines, and tools has primarily caused the delay between evidence and program. The perceptions that there is no need to address NCDs and a decreased emphasis on surveillance in our health system are two additional factors that could be contributing factors [10]. The adoption of surveillance initiatives in India has been swift once a standard global tool was developed. Measurement of a CVD control case of hypertension in discovered a straightforward yet precise method for determining arterial pressure. It took yet another attempt before the Cardiac Society of Great Britain and the American Heart Association recognized and officially accepted it. It is currently used extensively by clinicians, but its inclusion as part of an antenatal care package is the only way Para-health professionals in India's larger health system use it. Due to the necessity of using a stethoscope and the reluctance of medical professionals to permit its use by Para-health professionals, the expansion of services for measuring blood pressure was hampered. The availability of reliable digital blood pressure measuring instruments has eliminated this obstacle.

### Conclusion

Patients and communities require access to a wealth of evidence on CVD prevention and control, but progress in this direction is sluggish. Translational research appears to be concentrating more on the first level as opposed to the second level from the hospital to the community in most nations, including India. Despite the fact that both levels are significant, they face distinct obstacles. Taking into account the way that numerous lab and clinical explores have still not been converted into general wellbeing mediations in India, bigger public premium requests that attention ought to be on defeating the boundaries recognized previously. The development of public health programs to stop the rising tide of CVDs in India can be sped up by comprehending the translational research process through which epidemiological research can find application in public systems.

## References

- 1 Woolf SH (2008) The meaning of translational research and why it matters. *JAMA* 299: 211–3.
- 2 Kannel WB, Dawber TR, Kagan A, Revotskie N, Stokes J (1961) 3rd Factors of risk in the development of coronary heart disease--six year follow-up experience. The Framingham Study. *Ann Intern Med* 55: 33–50.
- 3 Jha P, Enas EA, Yusuf S (1993) Coronary artery disease in Asian Indian: prevalence and risk factors. *Asian Am Pac Isl J Health* 1: 163–75.
- 4 Enas EA, Metha J (1995) Malignant coronary artery disease in young Asian Indians: thoughts on pathogenesis, prevention, and therapy Coronary Artery Disease in Asian Indian (CADI) Study. *Clin Cardiol* 18: 131–5.
- 5 Vallapuri S, Gupta D, Talwar KK, Billie M, Mehta MC et al. (2002) Comparison of atherosclerotic risk factors in Asian Indian and American Caucasian patients with angiographic coronary artery disease. *Am J Cardiol* 90: 1147–50.
- 6 Joshi P, Islam S, Pais P, Reddy KS, Dorairaj P et al. (2007) Risk factors for early myocardial infarction in South Asians compared with individuals in other countries. *JAMA* 297: 286–94.
- 7 Beaglehole R, Ebrahim S, Reddy S, Voûte J, Leeder S (2007) Chronic Disease Action Group. Prevention of chronic diseases: a call to action. *Lancet* 370: 2152–7.
- 8 Paskalev D, Kircheva A, Krivoshiev S (2005) A centenary of auscultator blood pressure measurement: a tribute to Nikolai Korotkoff. *Kidney Blood Press Res* 28: 259–63.
- 9 Mendis S, Lindholm LH, Mancia G, Whitworth J, Alderman M et al. (2007) World Health Organization (WHO) and International Society of Hypertension (ISH) risk prediction charts: assessment of cardiovascular risk for prevention and control of cardiovascular disease in low and middle-income countries. *J Hypertens* 25: 1578–82.
- 10 Abegunde DO, Shengelia B, Luyten A, Cameron A, Celletti F et al. (2007) Can non-physician health-care workers assess and manage cardiovascular risk in primary care? *Bull World Health Organ* 85:432–40.