CORRESPONDENCE

Research priorities in non-communicable diseases in developing countries: time to go beyond prevalence studies

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Non-communicable diseases (NCDs) are a major threat to global health, accounting for nearly 72% of all deaths in 2016, of which nearly three quarters occurred in low- and middle-income countries (LMICs).¹ NCDs are to a large extent preventable, but little has been done to convert available knowledge or evidence into effective policies and actions. It is therefore important to prioritise issues pertaining to NCDs for research in the development of evidence-based interventions, with a view to translating these into action.

One of the objectives of the 2013–2020 Global Action Plan for the Prevention and Control of NCDs is the promotion of research in priority areas.² Setting priorities is important, particularly in resource-poor settings, for the most efficient use of scarce resources.³

PRIORITY RESEARCH ISSUES IN NON-COMMUNICABLE DISEASES

Understanding the epidemiology of NCDs requires a system to monitor the burden of NCDs and investigate risk factors. The World Health Organization's (WHO's) STEPwise approach for NCD risk factor surveillance is aimed at collecting data on risk factors that are comparable across sites worldwide.⁴ However, it is time for us to go beyond risk factor and disease prevalence surveys towards research in identifying 'best practices' to reduce risk factors. What interventions are to be delivered is well known, but how to deliver these effectively in resource-poor settings is the question. Operational research can provide answers to questions related to effective care delivery in constrained settings. Operational research also enables us to validate and adapt available interventions that are known to be cost-effective. Large, prospective studies are required to fill the gaps in disease epidemiology, prevention and control, progression and response to treatment.

Tackling this enormous disease burden and cost implications will require increased focus on primary care health delivery models. Research is needed to build models of primary care management that outline key elements such as the identification and management of modifiable risk factors and common NCDs, diagnosis, treatment and follow-up and, where

necessary, referral using standard protocols. The use of technology in primary care delivery models also needs to be explored systematically.

Public health can also look toward traditional approaches such as yoga, naturopathy and *ayurveda* to respond to some of these challenges, many of which can play a primordial role in the primary prevention of several diseases. Given the lack of compelling data on the safety and efficacy of these alternative approaches, these areas should also be investigated.

The main problem is that limited research is being conducted in LMICs on chronic NCDs, and few resources are available for such research. This requires the development of indigenous research infrastructure, including skilled manpower, all of which needs greater financial investment.

We outline below eight key points for NCD research in LMICs.

- 1 Define 'best practices' by evaluating the effectiveness of clinical and community-based interventions
- 2 Implement 'best practices' in clinical and population settings and optimise performance using operational research
- 3 Develop primary care models for NCD management
- 4 Conduct large cohort studies to bridge the gap between evidence and practice and to provide information on practice, care and outcomes
- 5 Study approaches that will improve patient adherence and enhance self-management
- 6 Conduct economic evaluations to study the cost-effectiveness of the different interventions
- 7 Promote patient-centred care by measuring functional status and health-related quality of life
- 8 Explore the role of complementary and alternative medicine in tackling NCDs.

CONCLUSION

This article outlines key research agendas in NCDs. Indigenous capacity building in NCD research is essential. Cost-analysis is required to identify cost-effective interventions. Operational research and health systems research are important for health systems strengthening and effective implementation of policies. The role of traditional approaches such as yoga and naturopathy in primary prevention of diseases should be explored.

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