

Innovative Approaches to Hypertension Control in Low- and Middle-Income Countries



Rajesh Vedanthan, MD, MPH^{a,*}, Antonio Bernabe-Ortiz, MD, MPH^b, Omarys I. Herasme, MPH^a, Rohina Joshi, MBBS, PhD, MPH^c, Patricio Lopez-Jaramillo, MD, PhD^d, Amanda G. Thrift, PhD^e, Jacqui Webster, PhD^c, Ruth Webster, PhD, MPH^c, Karen Yeates, MD, MPH^f, Joyce Gyamfi, MS^g, Merina Ieremia, PGDHS^h, Claire Johnson, MPH^c, Jemima H. Kamano, MBChB, MMedⁱ, Maria Lazo-Porras, MD^b, Felix Limbani, MPHⁱ, Peter Liu, MD^k, Tara McCready, PhD, MBA^l, J. Jaime Miranda, MD, MSc, PhD^b, Sailesh Mohan, MD, MPH, PhD^m, Olugbenga Ogedegbe, MD, MS, MPH^g, Brian Oldenburg, PhD, MPsyⁿ, Bruce Ovbiagele, MD, MSc^o, Mayowa Owolabi, MBBS, MSc, DrM^p, David Peiris, MBBS, PhD, MPH^c, Vilarmina Ponce-Lucero, BA^b, Devarsetty Praveen, MBBS, MD, PhD^q, Arti Pillay, PGDPH^r, Jon-David Schwalm, MD, MSc^l, Sheldon W. Tobe, MD, MScCH^s, Kathy Trieu, MPH^c, Khalid Yusoff, MBBS^t, Valentin Fuster, MD, PhD^a

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^a Zena and Michael A. Wiener Cardiovascular Institute, Icahn School of Medicine at Mount Sinai, One Gustave L. Levy Place, New York, NY 10029, USA; ^b CRONICAS Center of Excellence in Chronic Diseases, Universidad Peruana Cayetano Heredia, Av. Arce 497, Lima 18, Peru; ^c The George Institute for Global Health, University of Sydney, 50 Bridge Street, Sydney, NSW 2000, Australia; ^d Research Institute FOSCAL, Bucaramanga, Colombia; ^e School of Clinical Sciences at Monash Health, Monash University, Wellington Road and Blackburn Road, Clayton, VIC 3800, Australia; ^f School of Medicine, Queens University, 15 Arch Street, Kingston, ON K7L 3N6, Canada; ^g School of Medicine, New York University, 550 1st Avenue, New York, NY 10016, USA; ^h Samoan Ministry of Health, Motootua, Ifiifi street, Apia, Samoa; ⁱ College of Health Sciences, School of Medicine, Moi University, PO Box 3900, Eldoret 30100, Kenya; ^j Centre for Health Policy, School of Public Health, University of the Witwatersrand, 1 Jan Smuts Avenue, Braamfontein, Johannesburg 2000, South Africa; ^k University of Ottawa, 75 Laurier Avenue East, Ottawa, ON K1N 6N5, Canada; ^l Population Health Research Institute, 237 Barton Street East, Hamilton, ON L8L 2X2, Canada; ^m Public Health Foundation of India, Plot No. 47, Sector 44, New Delhi, India; ⁿ School of Population and Global Health, University of Melbourne, Parkville, VC 3010, Australia; ^o Medical University of South Carolina, 171 Ashley Avenue, Charleston, SC 29425, USA; ^p University of Ibadan, Ibadan, Nigeria; ^q The George Institute for Global Health, 301 ANR Centre, Road No 1, Banjara Hills, Hyderabad 500034, India; ^r Pacific Research Centre for the Prevention of Obesity and Non-Communicable Diseases, Fiji National University, Suva, Fiji; ^s University of Toronto, 27 King's College Circle, Toronto, ON M5S 1A1, Canada; ^t Universiti Teknologi MARA, Selangor and UCSI University, Kuala Lumpur, Malaysia

* Corresponding author. Icahn School of Medicine at Mount Sinai, One Gustave L. Levy Place, Box 1030, New York, NY 10029.

E-mail address: rajesh.vedanthan@mssm.edu

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KEYWORDS

- Hypertension • Low- and middle-income countries • Community engagement • mHealth
- Task redistribution • Salt reduction • Salt substitution • Polypill

KEY POINTS

- Elevated blood pressure is a major risk factor for cardiovascular disease, and it is the leading global risk for mortality.
- There is a need for novel approaches when addressing hypertension owing to its growing health and economic burden on populations in low- and middle-income countries.
- The Global Alliance for Chronic Diseases sponsored 15 research projects focused on hypertension.
- These research projects have involved the development and evaluation of several important innovative approaches to hypertension control.
- Strategies include community engagement, salt reduction, salt substitution, task redistribution, mHealth, and fixed-dose combination therapies.

INTRODUCTION

Cardiovascular disease (CVD) is the leading cause of mortality in the world, resulting in 17.3 million deaths annually, with 80% of these deaths occurring in low- and middle-income countries (LMICs).¹ Elevated blood pressure, a major risk factor for ischemic heart disease, heart failure, and stroke,² is the leading global risk for mortality.¹ Despite global efforts to combat hypertension, treatment and control rates are very low in LMICs.³ Given the continued significant health and economic burden on LMIC populations, there is an urgent need to address the problem by way of novel approaches.

Founded in 2009, the Global Alliance for Chronic Diseases (GACD), funds, coordinates, and facilitates global collaborations in implementation research, focusing on the prevention and treatment of chronic noncommunicable diseases in LMICs and vulnerable populations in high-income countries.⁴ The first round of GACD-sponsored research projects focused on hypertension, and included 15 research teams from around the world.⁵ These research projects have involved the development and evaluation of several important innovative approaches to hypertension control, including community engagement, salt reduction, salt substitution, task redistribution, mHealth, and fixed-dose combination therapies.

In this paper, we briefly review the rationale for each of these innovative approaches, as well as summarize the experience of some of the GACD teams in these respective areas. Where relevant, we also draw on the wider literature to illustrate

how these approaches to hypertension control are being implemented in LMICs.

COMMUNITY ENGAGEMENT

Health care delivery and health systems often fail to meet the needs and expectations of those who need them.^{6,7} Community engagement seeks to address this problem by optimizing the appropriateness and alignment of health care to the cultural, social, economic, and environmental setting.^{8,9} It encompasses participation, mobilization, and empowerment (Fig. 1).¹⁰ Participation refers to the active or passive engagement of the community in health services.^{10,11} Mobilization furthers this engagement through facilitation by health professionals, and empowerment involves a capacity-building process to engage communities in planning, implementing, and/or evaluating activities to achieve more sustainable health improvements.^{10,11} Community engagement has shown promise in supporting interventions to improve health outcomes related to both human immunodeficiency virus infection and AIDS, as well as maternal and child health.^{12,13} However, traditional methods for determining efficacy of community engagement are inadequate because there are significant challenges in teasing out the independent effects of the intervention regarding the process of community engagement itself.

Four GACD projects described herein have been conducted in Tanzania, Kenya, Colombia, Malaysia, India, and Canada. The investigators of these GACD projects have adopted a diverse range of community engagement activities, targeted at both individuals and systems, to identify

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