

Annual Report 2012-13



The PHFI logo is an engaging representation symbolic of good health, happiness, positive energy, renewal and collaborative change. The sunflower symbolises Public Health, and its petals represent flowering of its multiple disciplines and coming together of all stakeholders to fulfill the common goal of working towards a healthier India. Just as the sunflower turns to the sun for life-giving light, PHFI seeks to invigorate the Indian health system by knowledge generation, dissemination and its application for action to advance public health. The spiral in the logo depicts the bud of knowledge blossoming into the flower of action. Vibrant orange is the colour of vitality, white symbolises truth and green symbolises the harmonious relation to the environment.

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## Financials





"Dream no small dreams for they have no power to move the hearts of men"

Johann Wolfgang von Goethe

## From The Chairman's Pen

The multitude of challenges that India faces in the healthcare sector is threatening to impede its growth story. One in twenty of our children die in the first year and almost all of these deaths are preventable. We are, in fact, amongst the five countries in the world which account for more than half of the world's under-five deaths. Nearly two in five children under five years of age in India are underweight by global standards. With an estimated 2.2 million new cases. India accounts for about 1/5th of world's TB cases. India is only second to China in the number of diabetes cases with 1 in 8 adults having the risk of developing diabetes.

Clearly, we need a transformative approach to overcome these challenges. Our public expenditure on healthcare is 1.2 percent of our GDP, one of the lowest in the world. Experts estimate that India needs to increase its public expenditure to 2.5 percent to 3 percent of its GDP for achieving universal healthcare coverage for its citizens. While there is a pressing need for more facilities, doctors, paramedics and nurses, there is also a need for adequate services for prevention and effective treatment of diseases.

These initiatives need to be duly complemented by reform-focused policies in order to achieve the scale needed to address the challenges at hand. Healthcare

policies in the country need to promote public health beyond disease control and management. The need of the hour is to cover the entire gamut of issues that impact good health. Public health is about enabling the citizens of India to stay healthy and protecting them from threats to their health. In addition to healthcare services, an effective public healthcare system should provide improved sanitation, safe drinking water, food security and adequate nutrition. In other words, access to decent living conditions, both in rural and urban areas is critical. Further, we also need to prevent excessive environment pollution and related accidents. We also need to actively promote women's education and create awareness about the imperatives of good health.

The Public Health Foundation of India (PHFI) is a public-private initiative established in 2006 to strengthen India's public health institutions and systems in order to achieve higher levels of awareness, and better health outcomes for all. I am pleased to present PHFI's annual report for 2012-2013. As the report shows, PHFI's activities during the year grew in scope and depth.

Let me highlight a few achievements.

PHFI's work on tobacco-control illustrates a comprehensive approach to a public health issue. In partnership with like-minded

organizations, PHFI has carried out advocacy to achieve compliance with tobacco-control related laws. With support from the Bill & Melinda Gates Foundation, PHFI's tobacco control unit has trained a critical mass of people from two states. This critical mass comprised a diverse set of individuals including medical officers, allied health professionals, teachers, student peer leaders and community representatives. A study of the economics of tobacco-related activities was also carried out. A short-term distance education course was launched on health promotion with a focus on tobacco control. PHFI partnered with the National Tobacco Control Program on issues related to implementation. An international conference on 'Public Health Priorities in the 21st Century: The Endgame for Tobacco' was organized in September 2013 in partnership with the Ministry of Health and Family Welfare, Government of India and the World Health Organisation (WHO).

In order to increase and build human resource capabilities in diabetes management, PHFI initiated a unique once-a-month training program. This program has trained nearly 3,000 primary and secondary care physicians over time and another 2,500 physicians are currently being trained. Recognizing the huge challenge of diabetes, PHFI is implementing a Comprehensive Diabetes Prevention and

Management Program in two selected districts. The study will carry out formative research and subsequently implement and evaluate a multi-component, multi-level, comprehensive intervention program to improve the prevention, detection, and management of diabetes and hypertension. Public awareness and education is being promoted via this program by using social marketing strategies, targeted screening, tailored patient education, task-shifting to community health workers, healthcare provider training in evidence-based guidelines, quality improvement program, use of low-cost m-health technology, and advocacy to improve access to care. It is expected that this comprehensive intervention program will not only improve healthcare outcomes but also provide key insights into care pathways that can likely be scaled up to improve diabetes and hypertension management in India.

The access to health services, particularly in rural areas, is poor and technological solutions are needed. PHFI has pioneered development of a tablet-based solution for point-of-care diagnostics, called Swasthya Slate, which allows for a large number of tests to be carried out by a paramedical worker at or near the home.

PHFI has also collaborated with the Academy of Scientific and Innovative Research (AcSIR) to offer two M. Sc-PhD programs in Clinical Research and in Health Informatics and also with the University of Hyderabad to offer a Master degree in Public Health program. They continue to offer a large number of postgraduate diplomas and distance learning courses.

Let me take this opportunity to thank my colleagues on the Executive Committee for their guidance and support. We appreciate the efforts of PHFI's talented and committed staff who have delivered the results described in this report. Special congratulations are due to Dr K. Srinath Reddy, President of PHFI, for his election as president of the World Heart Federation. We also congratulate him for ably heading the Thematic Group on Health for All of the United Nations Sustainable Development Solutions Network which is providing technical support for the development of the post-2015 Sustainable Development Goals of the UN. We gratefully acknowledge the generous support from central and state governments, national and international donors, and our partners.

Public health cannot be the responsibility of the government alone. It requires involvement of civil society, private sector, communities, and individuals. India needs a collective response from all these stakeholders in order to realize its dream of improved health and access to healthcare for one and all. Engendering such a response is not only the challenge before us but also our moral responsibility we owe to our future generations.



**Mr. N R Narayana Murthy** Founder and Executive Chairman, Infosys Technologies Ltd

Chairman, PHFI July 2011 - October 2013

## From The **President's** Pen

The journey of PHFI over the past year is presented in this concise annual report which also describes the distance covered since its launch seven years ago. Let me begin by thanking all the members of PHFI's General Body and Executive Committee, its several Advisory and Review Committees which guide the functioning of PHFI and the individual Indian Institutes of Public Health, the technical and administrative members of the PHFI family and the many Indian and international partners who made this journey not only possible but also productive and pleasant. There have been no passengers on this voyage, as every one of PHFI's core and extended family members has swung an oar with vigour and verve to swiftly steer this ship ahead. This report reflects that collective effort.

PHFI now functions from Delhi, Gandhinagar, Hyderabad, Bhubaneswar, Gwalior and Bengaluru through four IIPHs, two training centres and several research, project and administrative offices. Its first permanent campus in Gandhinagar is under construction and will be ready by mid-2014. The Hyderabad campus will soon commence construction. A fifth IIPH in Shillong will be activated early next year. Beyond the infrastructure, PHFI has created an expanding talent of multi-disciplinary technical staff comprising 90 faculty, 27 lead researchers (who also teach part time) and 67 full time researchers and 487 other public health practitioners engaged in a wide variety of research or implementation projects. The faculty development pathway ensures that many of the young faculty advance to supported doctoral or postdoctoral training in highly reputed global academic institutions of public health learning.

The past year has seen two MSc- PhD programmes commence as a collaborative effort of the partnership PHFI established with the Academy of Scientific & Innovative Research (Academy of CSIR). A joint MPH programme has also been launched, as a joint venture with the University of Hyderabad, a leading central university. These join the four on-campus and five distance education programmes which are part of PHFI's existing offerings in public health education. Research and implementation projects are addressing a wide variety of knowledge generation and knowledge translation needs across the country.

While the research conducted by PHFI has

resulted in several scientific and policy related publications, many in high impact journals, we are even more motivated by our mission to translate knowledge into action. PHFI has been designated by WHO's Global Alliance for Health Systems and Policy Research as one of six Global Nodal Centres for strengthening research to policy linkages in public health. During the past year, PHFI convened two consultations to create a sustainable platform for regular interaction between the policy makers in Health Ministry and researchers from many Indian academic institutions.

Last year, PHFI was designated as the technical support unit for strengthening the Routine Immunization programme of the Ministry of Health and Family Welfare. This is in addition to the technical support that PHFI has been providing to the National HIV-AIDS Control Programme. PHFI is also assisting the Health Ministry's plans to enhance national capacity for allied health professional training through creation of new national and regional institutes. Assistance is also being provided to State governments to develop public health cadres and pilot programmes for universal health coverage.

The Affordable Health Technologies

division of PHFI has been developing highly innovative technologies for increasing the outreach and effectiveness of primary health care. One of them, Swasthya Slate, has been identified as a Game Changer by India Today and has received requests for supply from other national governments.

PHFI, in partnership with Ministry of Health, WHO and several Indian and global organizations, organized an international conference on Public Health Priorities for the 21st Century: Endgame for Tobacco in September 2013. The conference, which was attended by 600 participants from 52 countries, was addressed by the Prime Minister, Health Minister and Director General of WHO. A global campaign ' No More Tobacco in 21st Century (NMT 21C) was launched, which will feature former Indian cricket captain Rahul Dravid as one of the Ambassadors. Earlier, PHFI also released a report on Plain Packaging for tobacco products and mobilized support of leading parliamentarians. Other awareness and advocacy efforts include those related to Universal Health Coverage, Child Nutrition, Child Rights, Disabilities, Diabetes, Mental Health, Women's Health and Gender Violence.

Governance of PHFI was also strengthened last year with frequent meetings of the Executive Committee and Finance, Audit, Fund Raising, Nominations and Compensation Sub-Committees of the Executive Committee. Research and Academic Advisory Councils as well as the Institutional Ethics Committee have also been actively guiding our work.

As this year end review comes up before the General Body of PHFI, I woud like to place on record my sincere thanks to Mr N R Narayana Murthy who is concluding his term as Chair of PHFI on October 15, 2013. His vision and wisdom provided immense strength to PHFI, while ensuring good governance. We feel privileged that he will continue to be a part of the PHFI family even after he relinquishes the formal leadership of PHFI.



**Prof. K. Srinath Reddy** President, PHFI





## "Health is the first of all liberties."

Henri Frederic Amiel



Who We Are

Our vision is to strengthen India's public health institutional and systems capability and provide knowledge to achieve better health outcomes for all

M SS ON

- Developing the public health workforce and setting standards
- Advancing public health research and technology
- Strengthening knowledge application and evidenceinformed public health practice and policy

# Our Values

## Transparency

- Uphold the trust of our multiple stakeholders and supporters
- Honest, open and ethical in all we do, acting always with integrity

## Impact

- Link efforts to improving public health outcomes, knowledge to action
- Responsive to existing and emerging public health priorities

## Informed

- Knowledge based, evidence driven approach in all we do
- Drawing on diverse and multi disciplinary expertise , open to innovative approaches

## Excellence

- Aim for highest standards in all aspects of our work
- Encourage, recognise and celebrate our achievements

## Independence

- Independent view and voice, based on research integrity & excellence
- Support academic and research freedom, contributing to public health goals and interests

## Inclusiveness

- Strive for equitable and sustainable development, working with communities
- Collaborate and partner with other public health organizations

## Working towards a healthier India

PHFI is a public private initiative launched in 2006 by the Prime Minister Dr. Manmohan Singh as a response to emerging public health challenges, with the aim of strengthening public health capacity in the country. PHFI adopts a broad, integrative, multidisciplinary and multi sectoral approach to public health, tailoring its efforts to Indian conditions and engages with the many dimensions of public health that encompass promotive, preventive and therapeutic services. Our belief is that healthcare in India ought to be addressed not only from the scientific perspective of what works, but also from the social perspective of who needs it the most.

Structured as an independent Foundation and set up as a Society, PHFI is governed by an empowered body comprising senior government officials, eminent Indian and international academic and scientific leaders, civil society representatives and corporate leaders. It is headquartered in New Delhi with presence across India through its constituent units that include Indian Institutes of Public Health and Centres of Excellence.

PHFI has received institution building support from Ministry of Health and Family Welfare, several State Governments, corporate leaders, Indian philanthropists and international foundations including the Bill and Melinda Gates Foundation and the Wellcome Trust. We work collaboratively with all stakeholders in the health system. We provide technical support and assistance to central and state governments for informing and aiding governmental initiatives. We engage with other partners including the research community, academia, NGOs, civil society and media towards a collective action on health across sectors, and work with international agencies who support broader public health capacity building in India. Our aim is to play an enabling role in the transformation of India's health scenario.



PHFI is working towards education, training, research, policy & advocacy efforts and communication, cutting across major disciplines of public health.

- We currently have a network of four Indian Institutes of Public Health (IIPH) that have been created with the vision of becoming benchmarks in teaching, training, and research in the public health arena. In addition, two ancillary centers at Bangalore and Gwalior conduct academic programs. Their chief task is to educate and nurture human resources in various public health domains, thus contributing to overall national health goals.
- Our four Centres of Excellence have been setup to raise awareness and strengthen research, training and education in the high priority areas of public health. These centers are Centre for Cardiometabolic Risk Reduction in South Asia (CARRS), South Asia Centre for Disability inclusive Development and Research (SACDIR), South Asia Network of Chronic Disease

(SANCD), Centre for Mental Health (CMH) and Ramalingaswami Centre for Social Determinants of Health. More such Centres are under development on priority public health themes.

- Across PHFI, IIPHs and Centres of Excellence, we have 90 highly qualified faculty, 94 fulltime researchers, and 487 technical staff employed specifically for individual projects. From this pool, 83 hold PhDs. In addition, we have 55 adjunct and visiting faculty.
- ٠ WHO has appointed PHFI as one of the Nodal Centers for Health Policy and Systems Research (HPSR). Our research projects are interdisciplinary in nature on issues such as women and child health, nutrition, communicable and noncommunicable diseases, mental health, health systems and governance, and public health financing. PHFI is also recognised as a Scientific and Industrial Research Organisation (SIRO) by the Department of Scientific and Industrial Research, Government of India.

- Our training division was established in 2008 with the aim of bridging the gaps in quality and availability of services to people from all strata of society. In the year under review, we trained close to 8,000 participants.
- The mission of our Health Communication Division is to catalyze direct outreach as well as to raise the technical educational content and profile of communication and advocacy within the realm of public health. Our core competencies include health literacy and communication, education for capacity enhancement, public health advocacy and policy analysis, strategies and action plans, and human rights and legal literacy.
- Our Health Systems Support Unit, with a focus on implementation and practice, works towards strengthening healthcare related initiatives by leveraging research, education, advocacy, training, and offering the required technical support to build, strengthen, and sustain the public health delivery system.

## Governance

PHFI is an autonomously governed public private initiative registered as a Society under the Societies Registration Act 1860. Under the governance structure adopted by the Society, the Foundation is governed by a fully empowered, independent, General Body (comprising of all the members of the Society) that has representatives from multiple constituencies government, Indian and international academia and scientific community, civil society and private sector.

The management of the affairs of the Society is entrusted to the Executive Committee, the governing body of PHFI that is elected by the Members of the Society in accordance with the Rules and Regulations. The Chairperson of the General Body also chairs the Executive Committee. The President of the Society is a nonvoting, ex-officio member of the Executive Committee and holds the position of the Member Secretary.



In its meeting on October 15, 2013, the Executive Committee and General Body of PHFI unanimously elected Mr. Anand Mahindra, Chairman and Managing Director of the Mahindra Group, as its next Chairperson. Mr. Anand Mahindra succeeds Mr. N. R. Narayana Murthy, Founder and Executive Chairman of Infosys Technologies Ltd., who had held the position since July 2011.

As a leading industry figure, Mr.Mahindra has earlier served as President of the Confederation of Indian Industry, President of the Automotive Research Association of India (ARAI), member of Boards of the National` Stock Exchange of India and the National Council of Applied Economic Research, and as a member of the Council of Scientific & Industrial Research. Mr Mahindra is currently a member of several national level initiatives including India Council for Sustainable Development, India Design Council, National Institute of Design and National Sports Development Fund.

Mr Mahindra is a firm believer in the power of education. He initiated the Nanhi Kali programme about two decades ago to provide free education to economically underprivileged girls in the country. He is a Trustee of the K.C. Mahindra Education Trust, which provides scholarships to students, and is also onthe Board of Governors of the Mahindra United World College of India. He is also a Life Trustee on the Board of Naandi Foundation.

Mr. Mahindra believes that a study of liberal arts is essential in shaping leaders of the future. He has given the largest personal donation overseas by an Indian – an endowment of 10 million USD to the Harvard Humanities Center, which has been relaunched as the Mahindra Humanities Center. General Body Membership as on October 16, 2013

Mr. Anand G. Mahindra (Chairperson) Chairman and Managing Director, Mahindra & Mahindra Ltd.

**Dr. Montek Singh Ahluwalia** Deputy Chairman, Planning Commission, GOI

**Mr. Ashok Alexander** Director, Antara Foundation

**Dr. Abhay Bang** Founder and Director Society for Education, Action and Research in Community Health (SEARCH)

**Ms. Mirai Chatterjee** Director, Social Security, Self Employed Women's Association (SEWA)

**Dr. Lincoln Chen** Director of Global Equity Centre, Harvard's Kennedy School

**Dr. James W. Curran** Dean, Rollins School of Public Health, Emory University

**Mr. Keshav Desiraju** Secretary, Ministry of Health & Family Welfare, GOI

**Dr. Timothy G. Evans** Director for Health, Nutrition and Population, World Bank

**Dr. Vishwa Mohan Katoch** Director General, Indian Council of Medical Research **Mr. Uday Nabha Khemka** Vice Chairman, SUN Group

**Dr. A. K. Shiva Kumar** Advisor, UNICEF

Mr. Gautam Kumra Director, McKinsey & Company

**Dr. David Lynn** Director, Strategic Planning & Policy, Wellcome Trust

**Ms. Kiran Malhotra** Chairperson, AKM Systems Pvt. Ltd

**Mr. T.N. Manoharan** Founder Partner, Manohar Chowdhary & Associates

**Dr. Raghunath A. Mashelkar** CSIR Bhatnagar Fellow, National Chemical Laboratory

**Mr. Raj Mitta** Chairman, Essential Value Associates Pte. Ltd.

**Mr. N. R. Narayana Murthy** Founder and Executive Chairman, Infosys Technologies Ltd.

**Mr. Shiv Nadar** Founder, HCL

Mr. T. K. A. Nair Advisor, Prime Minister's Office

**Dr. Ravi Narayan** Community Health Advisor, Society for Community Health Awareness, Research & Action (SOCHARA) **Dr. Peter Piot** Director, London School of Hygiene & Tropical Medicine

**Dr. Jagdish Prasad** Director General of Health Services, Ministry of Health & Family Welfare, GOI

**Mr. J. V. R. Prasada Rao** UN Secretary General Special Envoy for AIDS, Asia & the Pacific

**Prof. K. Srinath Reddy** President, Public Health Foundation of India

**Dr. Anil Seal** Director, Cambridge Commonwealth Trust and Cambridge Overseas Trust

**Dr. Amartya Sen** Professor of Economics & Philosophy, Harvard University

**Dr. Jaime Sepulveda** Executive Director, Global Health Sciences, University of California

Mr. Raman Sharma Senior Partner, AZB & Partners

**Mr. Michel Sidibé** Executive Director, UNAIDS

Mr. Harpal Singh Chairman, Save the Children; Mentor & Chairman Emeritus, Fortis Healthcare (India) Limited

#### Mr. Prashanth Vasu Partner, McKinsey & Company

## Executive Committee

Mr. Anand G. Mahindra (Chairperson) Dr. Montek Singh Ahluwalia **Dr. Abhay Bang** Ms. Mirai Chatterjee Mr. Keshav Desiraju Dr. Timothy G. Evans Mr. Uday Nabha Khemka Dr. A. K. Shiva Kumar Mr. Gautam Kumra Dr. David Lynn Ms. Kiran Malhotra Dr. Raghunath A. Mashelkar Mr. I. V. R. Prasada Rao Prof. K. Srinath Reddy Mr. Harpal Singh

#### NOTE:

The following are ex-officio members of the General Body: Secretary, MoHFW ; Director General of Health Services, MoHFW; Director General, Indian Council of Medical Research; and one representative from the office of the Prime Minister of India, as may be nominated by the PMO from time to time. Further, Secretary, MoHFW is an ex-officio member of the Executive Committee.

## Sub-Committees

The following sub-committees aid the the functioning of the Executive Committee and General Body

## Audit Committee of the General Body of PHFI

Mr. T. N. Manoharan, Treasurer of PHFI GB (Chair) Dr. Timothy G. Evans Dr. David Lynn Mr. J. V. R. Prasada Rao

## Finance and Investment Committee of the Executive Committee of PHFI

Mr. Gautam Kumra (Chair) Mr. Uday Nabha Khemka Dr. A. K. Shiva Kumar Mr. Harpal Singh Mr. Raj Mitta (invitee, as Chair of Fundraising Committee)

## Fundraising Committee of the Executive Committee of PHFI

Mr. Raj Mitta (Chair) Ms. Kiran Malhotra Dr. Anil Seal Mr. Harpal Singh Mr. Gautam Kumra (invitee as Chair of Finance and Investment Committee)

#### Nomination and Compensation Committee of the Executive Committee of PHFI

Mr. Anand G. Mahindra (Chair) Dr. Montek Singh Ahluwalia Ms. Mirai Chatterjee Mr. Keshav Desiraju Dr. A. K. Shiva Kumar Mr. J. V. R. Prasada Rao

## PHFI Management Team

PHFI is organised as Program Divisions (Education, Research, Training, Health Communication, Health Systems Support), Constituent Units (Indian Institutes of Public Health, Centres of Research), and Operations Divisions (Finance, HR, Infrastructure & Facilities, IT, Administration, Legal). All division/institute/function heads have a final reporting to the President of the Foundation.

The President, as the head of the Foundation, is assisted by Advisory Councils, Management Committees and the Senior Management Team.

#### **KEY COUNCILS & COMMITTEES**

PHFI has councils for academics and research, and an Institutional Ethics Committee. Additionally, each of the IIPHs have councils represented by academicians and state/regional representative members to provide guidance.

## PHFI's Academic Advisory Council

Comprising renowned academicians and government representatives.

**Dr. Abraham Joseph (Chair)** Director, Karigiri Leprosy Hospital

**Dr. Anurag Agrawal** Principal Scientist, CSIR Institute of Genomics and Integrative Biology

## Dr. Shalini Bharat

Professor, Centre for Health and Social Sciences, Tata Institute of Social Sciences

## Dr. Pat Doyle

Professor, Department of Noncommunicable Disease Epidemiology, London School of Hygiene and Tropical Medicine

**Dr. Timothy G. Evans** Director, Health, Nutrition and Population, World Bank

## Dr. P Padmanabhan

Advisor, Public Health Administration, National Health Systems Resource Centre (NHSRC), MoHFW

**Dr. S. Shanbhag** Former President, Indian Association of Occupational Health

#### **Dr. Amarjeet Singh**

Additional Secretary, Teacher Education, Ministry of Human Resource Development, GOI

## Dr. Gita Sen

Professor, Centre for Public Policy, Indian Institute of Management, Bangalore

## Dr. H. Sudarshan

Founder and Honorary Secretary, Karuna Trust

## PHFI's Research Advisory Council

Advises on our research agenda and sets the standard for high quality and relevant research

## Dr. Barry Bloom (Chair)

Harvard University Distinguished Service Professor and Joan L. and Julius H. Jacobson Professor of Public Health

## Prof. Rifat Atun

Professor, International Health Management and Head, Health Management Group, Imperial College London

## Dr. Shally Awasthi

President, Indian Clinical Epidemiology Network

#### Prof. Kalpana Balakrishnan

Professor & Director, ICMR Center for Advanced Research on Environmental Health, WHO Collaborating Center for Occupational and Environmental Health, Sri Ramachandra University

## Dr. Nilanjan Chatterjee

Senior Investigator & Chief, Biostatistics Branch, Division of Cancer Epidemiology & Genetics, National Cancer Institute

#### Dr. N. K. Ganguly

Distinguished Biotechnology Research Professor, National Institute of Immunology **Dr. Indrani Gupta** Professor & Head, Health Policy Research Unit, Institute of Economic Growth

**Prof. Prabhat Jha** Professor, University of Toronto Chair in Disease Control

**Prof. J P Muliyil** Professor , Community Health, Christian Medial College **Dr. Tulsi Patel** Professor, Sociology, Delhi School of Economics

**Dr. C. Venkata S Ram** Chief Executive Officer, Medicity Institute of Medical Sciences

**Dr. Usha Ramakrishnan** Associate Professor, Hubert Department of Global Health, Rollins School of Public Health, Emory University

## Dr. Nikhil Tandon

Professor, Department of Endocrinology and Metabolism, All India Institute of Medical Sciences, New Delhi

## Institutional Ethics Committee

Provides guidance and promotes ethical conduct in research, ensuring research subjects are not put to risk and researchers get full benefits of their research.

## Prof. Ranjit Roy Chaudhury (Chair)

Chairman, Task Force for Research, Apollo Hospitals Educational and Research Foundation

**Ms. Anjani Aiyagari** Advocate-on-record, Supreme Court of India

## Mr. Vinod Bhanu

Executive Director, Centre For Legislative Research and Advocacy

## Dr. Tulsi Patel

Professor of Sociology, Delhi School of Economics

**Dr. Prema Ramachandran** Director, Nutrition Foundation of India

**Dr. Siddarth Ramji** Head, Department of Neonatology, Maulana Azad Medical College

## Dr Nikhil Tandon Professor, Department of Endocrinology and Metabolism, All India Institute of Medical Sciences, New Delhi

**Dr. Rajani Ved** Advisor, Community Process , National Health Systems Resource Centre, National Institute of Health & Family Welfare **Prof. Ramanan Laxminarayan** Vice President, Research and Policy, PHFI

**Prof. Sanjay Zodpey** Director, Public Health Education, PHFI and Director, IIPH-Delhi

**Prof. Lalit Dandona** Distinguished Research Professor , PHFI

**Dr. N. Nakkeeran** Associate Professor, IIPH-Gandhinagar

# Advisory Council of IIPH-Delhi

Name	Designation
Mr. J.V.R Prasada Rao (Chair)	UN Secretary General Special Envoy for AIDS, Asia & the Pacific
Ex-officio position	MD, National Rural Health Mission, Government of India
Ex-officio position	Principal Secretary (Finance), Government of Delhi
Ex-officio position	Principal Secretary (Health), Government of Delhi
Ex-officio position	Principal Secretary (Health), Government of Haryana
Ex-officio position	Principal Secretary (Health), Government of Rajasthan
Prof. Rama V. Baru	Professor, Centre of Social Medicine and Community Health, Jawaharlal Nehru University
Prof. B. S. Garg	Director, Professor & Dean, Mahatma Gandhi Institute of Medical Sciences
Prof. David Heymann	Chairman, Health Protection Agency, London
Dr. Arvind Pandey	Director, National Institute of Medical Statistics, ICMR
Prof. N.K. Sethi	Professor & Head, Department of Planning & Evaluation, National Institute of Health and Family Welfare
Prof. K. Srinath Reddy	President, PHFI
Prof. Sanjay Zodpey	Director, IIPH-Delhi and Director, Public Health Education, PHFI

# Advisory Council of IIPH-Hyderabad

Prof. Shantha Sinha (Chair)	Professor, Political Science, University of Hyderabad
Ex-officio position	Principal Secretary (Health), Government of Andhra Pradesh
Ex-officio position	Principal Secretary (Finance), Government of Andhra Pradesh
Ex-officio position	Principal Secretary (Health), Government of Karnataka
Ex-officio position	Principal Secretary (Health), Government of Kerala
Ex-officio position	Principal Secretary (Health), Government of Tamil Nadu
Dr. A. K. Shiva Kumar	Advisor, UNICEF
Dr. Raghunath A. Mashelkar	CSIR Bhatnagar Fellow, National Chemical Laboratory
Mr. Raj Mitta	Chairman, Essential Value Associates Pte. Ltd.
Dr. Ch. Mohan Rao	Director, Centre for Cellular & Molecular Biology, Hyderabad
Dr. A. Padma Raju	Vice Chancellor, Acharya N.G. Ranga Agricultural University
Dr. I. V. Rao	Vice Chancellor, NTR University of Health Sciences
Dr. Gullapalli N Rao	Chair, Hyderabad Eye Institute
Prof. K. C. Reddy	Chairman, Rajiv Education & Employment Mission of Andhra Pradesh
Prof. Geeta K. Vemuganti	Dean, School of Medical Sciences, University of Hyderabad
Prof. K. Srinath Reddy	President, PHFI
Prof. G. V. S. Murthy	Director, IIPH-Hyderabad

# Governing Council of IIPH-Gandhinagar

Name	Designation	Ex-officio position	Principal Secretary, (Health), Government of Chhattisgarh
Selection of Chairperson underway Ex-officio position Principal Secretary (Finance)		Ex-officio position	Principal Secretary (Health),
	Government of Gujarat \	Ex-officio position	Principal Secretary (Finance),
Ex-officio position	Principal Secretary (Health), Government of Gujarat	Ex-officia position	Government of Odisha Principal Secretary (Health)
Ex-officio position	Commissioner (Health), Government of Gujarat		Government of Odisha
Ex-officio position	Principal Secretary (Education), Government of Gujarat	Ex-officio position	Principal Secretary (Health), Government of West Bengal
		Mr. Ashok Alexander	Director, Antara Foundation
Ms. Mirai Chatterjee	Director, Social Security, Self Employed Women's Association (SEWA) Director, McKinsey & Company	Prof. Surabhi Banerjee	Vice Chancellor, Central University of Orissa, Koraput
		Dr. Abhay Bang	Founder & Director, Society for Education, Action and Research
Mr. Gautam Kumra			in Community Health (SEARCH)
Prof. K. Srinath Reddy	President , PHFI	Ms. Mirai Chatterjee	Director, Social Security, Self Employed Women's Association
Prof. Dileep Mavalankar Director, IIPH-Gandhinagar		Du Timethu C. Furne	(SEVVA)
Advisory Council of IIPH, Bhubaneswar		Dr. Innotny G. Evans	Population, World Bank
		Mr. P.K. Hota	Director, Norway India Partnership Initiative
		Dr. Pratap Bhanu Mehta	President, Centre for Policy Research
NameDesignationSelection of Chairperson underway		Dr. Ramakant Panda	Vice Chairman and Chief Cardiovascular Thoracic Surgeon,

Prof. K. Srinath Reddy

Dr. Subhash Salunke

Ex-officio position

Principal Secretary (Health), Government of Bihar Asian Heart Institute, Mumbai

Director, IIPH Bhubaneswar

President, PHFI





"Alone we can do so little, together we can do so much."

Helen Keller

## National Collaborations



#### Andhra Pradesh 1

- Government of Andhra Pradesh
- Science Health Allied Research Education
- National Institute of Nutrition
- George Institute for Global Health -٠ India
- Society for Elimination of Rural • Poverty
- Pushpagiri Vitreo Retina Institute
- University of Hyderabad

#### Goa 2

Sangath

## **3** Gujarat

- Government of Gujarat
- All India Institute of Diabetes and Research
- Child Health Foundation; Self Employed Women's Association

## **4** Karnataka

- Government of Karnataka
- Centre for Public Health and Equity (CPHE)
- Manipal Academy for Higher Education
- Akshara Foundation ٠
- Sri Devaraj Urs Academy of Higher ٠ Education and Research

## **6** Kerala

- Government of Kerala •
- National rural health mission
- Sree Chitra Tirunal Institute for ٠ Medical Sciences and Technology

## 6 Maharashtra

- Federation of Obstetric and Gynaecological Societies of India
- Association of Physicians of India
- Government of Maharashtra
- Indian Cancer Society
- Mahatma Gandhi Institute of Medical Sciences
- School of Health Systems Studies
- Interdisciplinary School of Health Sciences - University of Pune

## Meghalaya

Government of Meghalaya

## 8 New Delhi

• Government of NCT of Delhi: Ministry of Health and Family Welfare; National Board of Examination; Academy of Scientific & Innovative Research: Council of Scientific and Industrial Research ; Confederation on Indian Industry; Federation of Indian Chambers of Commerce and Industry; TERI University; Voluntary Organization in Interest of Consumer Education; International Clinical Epidemiology Network Trust: Indian Medical Association College of General Practitioners; National AIDS Control Organization: Institute for Studies in Industrial Development; International Center for Genetic Engineering and Biotechnology: Consortium for Trade and Development; Indian National Science Academy, Ministry of Science and Technology; Centre for Social Medical and Community

Health, Jawaharlal Nehru University; Program for Appropriate Technology in Health, Indian Council of Medical Research: National Human Rights Commission; HCL Corporation; National Rural Health Mission: Nehru Trust for Cambridge University; National Health Systems Resource Centre: Science Health Allied Research Education: The Asia Foundation: Planning Commission; Population Foundation of India; Medical Council of India: National Institute of Communicable Diseases; National Vector Borne Disease Control Program; National Institute of Health and Family Welfare; Central Council for Research in Unani Medicine; Medical Council of India; Government of Delhi: Government of India; INCLEN Trust International; Child in Need

## 9 Odisha

- Central University of Odisha
- Government of Orissa

## 10 Punjab

Government of Punjab

## West Bengal

 Child in Need institute India, All India Institute of Hygiene and Public Health

## 12 Jammu and Kashmir

• State Health Society

## Uttarakhand

• Government of Uttarakhand

## 🛯 Rajasthan

- Government of Rajasthan
- Birla Institute of Technology & Science

## 15 Tamil Nadu

- Indian Clinical Epidemiology
   Network
- Tamil Nadu Health Systems Project
- Christian Medical College
- Jawaharlal Institute of Post Graduate Medical Education and Research

## **1**6 Jharkhand

• Government of Jharkhand

## 🗊 Sikkim

- Health Care Human Services
   &Family Welfare Department
- Government of Sikkim

## 18 Madhya Pradesh

Government of Madhya Pradesh

## Our International Collaborations

- **1** Africa: The African Development Bank
- Australia: Nossal Institute for Global Health - University of Melbourne; AusAID; Deakin University; University of Queensland, University of Sydney – School of Public Health, George Institute for International Health
- Bangladesh: International Centre for Diarrheal Diseases
- **Belgium**: European Commission, Institute of Tropical Medicine,
- Canada: University of Manitoba; University of Alberta; McMaster University; Population Health Research Institute; Simon Fraser University; International Development Research Centre; British Columbia Institute of Technology; Population Health Research Institute, University of Manitoba, McGill University, Centre Hospitalier affilie Universitaire de Quebec, University of Toronto- Centre for Global Health Research, York University, International Development Research Centre,
- <sup>6</sup> China: China Medical Board
- Denmark: University of Copenhagen, Faculty of Health Sciences
  - **France**: Centre Hospitalier affilie Universitaire de Quebec
  - **Finland**: National Public Health Institute

- Germany: University of Bonn; CBM;University of Heidelberg
- **1** Italy: World Food Programme
- Mexico: National Institute of Public Health of Mexico
- Nepal: B P Koirala Institute of Health Science
- Norway: Norwegian Ministry of Foreign Affairs, Norway India Partnership Initiative
- Netherlands: Erasmus Medical Centre, KIT Royal Tropical Institute, Vrije University
- **Sweden**: Swedish National Institute of Public Health; Swedish International Development Agency
- Switzerland: International Centre Cointrin, Aga Khan Foundation, World Health Organisation, The Global Fund to Fight AIDS, Tuberculosis and Malaria. World Heart Federation University of Laussane
- <sup>18</sup> Phillipines: University of Phillipines
- **United Kingdom**: BUPA Foundation, Cambridge Commonwealth Trust, Cambridge Malaysian Education and Development Trust, College of Medicine and Veterinary Medicine, Faculty of Public Health, Health Protection Agency, Imperial College, Institute of Psychiatry, International Centre for Eye Health, King's College, Liverpool School of Tropical Medicine,

London School of Hygiene & Tropical Medicine, Newcastle University, Royal Colleges of Physicians of the United Kingdom, The Royal Commonwealth Society for the Blind, UK Department for International Development, University College London, University of Aberdeen, University of Bristol, University of Cambridge, University of Edinburgh, University of Glasgow, University of Leeds, University of Liverpool, University of London, University of Oxford - Division of Public Health and Primary Health Care, Wellcome Trust

**ODE United States of America:** Amar Foundation, American India Foundation, Association of Schools of Public Health, Bates College, Bill and Melinda Gates Foundation, Boston University, California Institute for Telecommunication & Information Tech UCSD, CEDPA, Cornell University, Department of Public Health, Duke University, EcoHealth Alliance, Emerging Market Group, Fogarty International Centre, Ford Foundation, Georgetown University Medical Centre, Give2Asia, Harvard Humanitarian Initiative, Harvard School of Public Health, Institute for Health Policy, Institute of Public Health Sciences Albert Einstein College, Intrahealth International, John Hopkins Bloomberg School of Public Health Lifespan-Tufts-Brown Centre for AIDS

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research, MacArthur Foundation, National Institutes of Health, Occupational Knowledge International, Packard Foundation Rockefeller Foundation, Rollins School of Public Health (Emory University) State University of New York, The World Bank Group, Tides Foundation, Tulane University - School of Public Health & Tropical Medicine, UNICEF, United Nations, University of Alabama at, Birmingham – School of Public Health, University of Albany – School of Publ Health, University of California, University of Illinois – School of Public Health, University of Medicine and Dentistry, University of Michigan, University of Minnesota - School of Public Health, University of North Carolina- School of Public Health, University of Pittsburgh - School of Public Health, University of South Florida – School of Public Health, University of Texas - Health Science Centre, University of Washington, USAID, Vanderbilt University, Weill Cornell Medical College - Cornell University, World Justice Project - American Bar Association, Yale University, Yeshiva University

**2 Pakistan**: The Aga Khan University



The list includes institutes/organizations who are supporting us or working with us on public health issues including project activity. This list is not comprehensive.





"You measure the size of the accomplishment by the obstacles you had to overcome to reach your goals!"

Booker T. Washington

# The Year

## ► APRIL 2012

National Conference on Universal Health Coverage



## **JULY 2012**

The Regional Consultation on One Health Alliance in South Asia to combat Zoonoses organized in partnership with the New York based-Eco Health Alliance





 MAY 2012
 Release of Tobacco Control Training Films and Resources

## **AUGUST 2012**

Report published on Women's Quality Perception Study in partnership with USAID, LSHTM and University of Aberdeen

## **JUNE 2012**

Release of the policy document on plain packaging of tobacco products by the Australia-India Institute Taskforce on Tobacco Control, co-chaired by Prof Srinath Reddy



SEPTEMBER 2012 Launch of the Centre for Mental Health



# Gone by...

## **OCTOBER** 2012

Visit by Swiss Delegation and discussions on Health Policy



## JANUARY 2013

Convocation and expansion of the Certificate Course in Evidence Based Diabetes Management





## NOVEMBER 2012

Release of the report on National Initiative for Allied Health Sciences : From 'Paramedics' to 'Allied Health Professionals'

FEBUARY 2013 The Minister of Health of Timor Leste, visited PHFI for a demonstration of Swasthya Slate

## **DECEMBER 2012**

Commencement of construction of IIPH -Gandhinagar Campus



## MARCH 2013

Fit Ho Jao Campaign celebrating a passion for active lifestyle, conducted at Dilli Haat, New Delhi







## "He.....that prevents a disease is the safest physician"

Thomas Fuller

# Thematic Areas of Focus Capacity Building





## Building and developing workforce towards effective delivery of public health services

India is undergoing a rapid transition in its health status and, therefore, needs a public health approach wherein healthcare goes beyond simply medical care. It promotes health by focusing on preventive measures which address the causes of diseases. It also focuses on the unmet need for greater public health expertise - both in numbers and in skill - to run the health systems and services of the country. For this, a multipronged approach towards capacity building is imperative, through education and training which is multidisciplinary in content, suitably structured in duration, and not confined merely to medical professionals.

Capacity building in public health is one of the primary mandates of the Public Health Foundation of India (PHFI). PHFI has set out to build broad based public health capacity by:

- establishing new institutes of public health;
- assisting the growth of existing public health training institutions/departments and facilitating their evolution into major institutes of public health;
- establishing a strong national research network of public health and allied institutions which would undertake policy- and program-relevant research that will advance public health goals in prioritized areas, with suitable international partnerships where useful and appropriate; and
- providing in-service training on various public health areas of topical importance.

## The Indian Institutes of Public Health

Four Indian Institutes of Public Health have been established under the aegis of PHFI, one each in Gandhinagar (Gujarat), Hyderabad (Andhra Pradesh), Delhi, and Bhubaneswar (Odisha). Additionally, a partnership has been established in Gwalior (Madhya Pradesh) and Bengaluru (Karnataka) with the state governments, and a Memorandum of Understanding for the establishment of an IIPH has been signed with the Government of Meghalaya. The IIPHs are envisioned as hubs of teaching, training, research, policy, knowledge-sharing, and experience in the evolving discourse on public health.

These fully-residential institutes are expected to become nodal points for public health education, advocacy, research, and practice in the future, providing quality public health training to graduates from different disciplines. The aim of our programs at each IIPH is to make education and research activities relevant to India in content and context, while attaining standards which are qualitatively comparable to the best in the world. By developing an understanding and broad appreciation of the multiple determinants of health, and imparting skill sets needed for designing and implementing a broad range of multisectoral actions required to advance public health, PHFI shall enhance the nature of healthcare and opportunities for improving it through these institutions.

## IIPH, Gandhinagar (IIPH-G)

IIPH-G was born on World Health Day - April 7, 2008. Students from various parts of Gujarat, Madhya Pradesh, Chhattisgarh, Andhra Pradesh, and Punjab have been professionally trained at the Institute. IIPH-G has also been providing research-based health policy advice to the Government of Gujarat. The faculty members are on various government committees, nongovernmental organization (NGO) boards and international advisory committees. The Institute's activities have received funding support from, among others, National Rural Health Mission (NRHM) of the Ministry of Health and Family Welfare, the Medical Council of India, the Council of Scientific Innovation and Research. the National Bank for Agriculture & Rural Development, the Karolinska Institute, and the Natural Resources Defense Council. IIPH-G faculty members are involved in several research projects in areas such as maternal and child health, disease
surveillance, nutrition, microfinance, monitoring health programs and advocacy, heat stress, and health due to climate change. In addition, IIPH-G has developed research and academic collaborations with the Karolinska Institute (Sweden), Aberdeen University (UK), Natural Resources Defence Council (USA) , and Boston University and Columbia University (USA).

### IIPH, Delhi (IIPH-D)

IIPH-D, which commenced its operations in November 2008, has successfully conducted many shortterm training programs and workshops in various fields related to public health. Research is being conducted in the domains of issues such as acute and chronic diseases, tobacco, nutrition, maternal and child health, and health systems and health policy. The activities and research at IIPH-D have received funding support from the Ministry of Health and Family Welfare, Department of AYUSH, the Indian Council of Medical Research, the Central Council for Research in Unani Medicine, the Department of Science & Technology, the Medical Council of India, the United Nations Children's Fund, and the World Health Organisation, to name a few.

#### IIPH, Hyderabad (IIPH-H)

On April 7, 2007(World Health Day), PHFI laid the foundation stone for its first institute in Hyderabad, in partnership with the Government of Andhra Pradesh, in the presence of the then Chief Minister of Andhra Pradesh, Dr. Y S Rajasekhara Reddy; the Union Minister for Health and Family Welfare, Dr. Anbumani Ramadoss; and the Deputy Chairman, Planning Commission, Mr. Montek Singh Ahluwalia. In addition to delivering education and conducting training and research, IIPH-H also assists in the implementation of national programs, such as the National Rural Health Mission as well as state

and regional public health initiatives.

#### IIPH, Bhubaneswar (IIPH-B)

IIPH Bhubaneswar commenced its academic activities from August 2010 with a Post Graduate Diploma course in Public Health Management, which attracted government doctors from Odisha and Chhattisgarh and some self-sponsored candidates. IIPH-B has been establishing important linkages with the largest residential tribal centre in Bhubaneshwar , a part of Kalinga Institute of Social Study (KISS). These linkages will form a broad framework for a Centre for Tribal Health and Universal Health Coverage (UHC).



# PHFI-IIPHs

Currently PHFI's faculty pool constitutes 90 full-time, 35 adjunct, and 20 visiting (eminent) faculty members. They have a multidisciplinary background, are internationally trained with strong research skills, and have scores of papers published in national and international journals of repute to their credit. Forty-five of our full- time faculty members hold a PhD, with 15 currently pursuing a PhD. Additionally, some of our total pool of 94 full-time researchers are also involved in teaching; 18 of them hold PhDs.

Faculty Members with their Departmental Affiliations as on August 1, 2013



Future Faculty Programme and PHFI-UK Consortium Wellcome Trust Capacity Building Programme

One of the critical needs with regard to the planned provision of high quality and large-scale public health education in India is the development of appropriately skilled faculty in adequate numbers. In view of this, PHFI launched the Future Faculty Programme (FFP) in 2006, to develop future leaders in public health academia. Till 2009, over 40 selected candidates were given fellowships for Masters level courses in Public Health at 30 eminent schools of public health in the United States, the United Kingdom, Europe, Canada, and Australia. In 2009 PHFI, along with a consortium of 15 U.K. partner schools, was awarded a Wellcome Trust Capacity Building grant for faculty development. The



PHFI-UK Consortium Wellcome Trust Capacity Building Programme is an ambitious five-year program that aims to develop the teaching and research skills of PHFI's faculty members by financially supporting graduate and doctoral studies, collaborative research projects and research fellowships, and faculty exchanges between PHFI and the United Kingdom. This is the fifth year of the program and after a review of its activities and progress in early 2013, Wellcome Trust has extended it to 2017. The Teaching & Training Committee, Research Committee, Evaluation Committee, and the Executive Committee, which include members from PHFI/IIPHs and a consortium of 16 U.K. universities and organizations, steer the work of this program.

### Achievements

About 90 persons have had their research, teaching, and training capacity systematically built under Wellcome Trust Programme for contributing to public health in India. This includes 27 doctoral study awards, 15 Master's study awards, 18 research fellowships and 21 research grants. Ten short courses organized jointly by the U.K. and India faculty have been held with about 220 participants. Around 40 research papers have been published under this program, and many more are expected over the next few years.

# IIPH and Academic Programs

A guiding principle of the academic programs at PHFI and the IIPHs is making public health education and allied research activities relevant to India in content and context, while attaining international standards.

Recognizing the need for reaching out to students who are unable to attend full-time courses, the Institutes have also ventured into distance education. Courses are delivered in the hybridblended learning mode, with a combination of interactive online computer-based virtual lectures and discussions with mentors through a discussion board and project work.

## History and evolution of the PGDPHM program

In July 2008, the Government of India launched the Post Graduate Diploma in Public Health Management (PGDPHM). Inaugurated by former Union Secretary, Ministry of Health and Family Welfare Mr. Naresh Dayal, this flagship program under the umbrella of the National Rural Health Mission, aims to strengthen the capacity of health professionals in the domain of health management and administration. The PGDPHM consortium was constituted initially with four partner institutes - IIPH, Gandhinagar; the Mahatma Gandhi Institute of Medical Sciences (MGIMS), Wardha; the National Institute of Health and Family Welfare (NIHFW), New Delhi; and the All India Institute of Hygiene and Public Health (AIIH&PH), Kolkata. This consortium has since expanded and currently eleven institutes offer the PGDPHM program across India, under the leadership of PHFI. Additionally, a partnership has been established with the state governments of Madhya Pradesh and Karnataka to offer the PGDPHM program at partner institutes in Gwalior and Bangalore respectively. The health manpower at the State Institute of Health Management and Communication (SIHMC), Gwalior, is being trained in Health Management skills as a part of the PGDPHM program. IIPH-Hyderabad is working closely with the Government of Karnataka and has set up a campus in Bangalore to help enhance public health capacity in the state.



### On Campus Courses

Name of Program	Year of Launch	Name of Institutes	Program Duration
Post Graduate Diploma in Public Health Management (PGDPHM)	2008	IIPH, Delhi IIPH, Bhubaneswar IIPH, Gandhinagar IIPH, Hyderabad SIHMC, Gwalior IIPH, Hyderabad- Bangalore Campus	12 months
Post Graduate Diploma in Biostatistics and Data Management (PGDBDM)	2008	IIPH, Hyderabad	12 months
Post Graduate Diploma in Health Economics, Health Care Financing and Health Policy (PGDHEP)	2008	IIPH, Delhi	9 months
Post Graduate Diploma in Clinical Research (PGDCR)	2010	IIPH, Delhi	12 months
Integrated MSc & PhD in Clinical Research	2013	IIPH, Delhi	Residential course lasting for two years of MSc and three years of PhD in Clinical Research.
Integrated MSc & PhD In Health Informatics	2013	IIPH, Hyderabad	Residential course lasting for two years of MSc and three years of PhD in Health Informatics 38

The prime feature in the content and pedagogy of the program is its placement in the context of the NRHM. It offers multiple encouragements to motivate the states and the central government to establish a specialized public health cadre. Its multidisciplinary facets are aimed at addressing the mismatch in the demand and supply of health professionals.

# Academic partnership between PHFI and the Academy of Scientific & Innovative Research

In April 2013, PHFI and AcSIR entered into an academic partnership to enhance initiatives to address public health issues in a comprehensive and innovative manner, thus offering an opportunity to promote globally recognized health academics and scientific research in India. The mission is to create highest quality personnel with cross-disciplinary knowledge, in order to generate leaders in the field of science and technology. The last mile hurdles that impede transfer of the labstrength of AcSIR to the bedside can be met by PHFI's knowledge of that domain and its networks with public health and medical institutions.

AcSIR is an Institution of National Importance established by an Act of Parliament, the Academy of Scientific Innovative Research Act, 2011, with a mandate to create and train science and technology leaders through a combination of innovative and novel curricula, pedagogy, and evaluation.





Geographical distribution of PHFI graduates from residential full-time courses Year 2008-09 to 2011-12





# Distance Education Programs

Name of Program Year of Launch Program Duration	Post Graduate Diploma in Public Health Nutrition – Distance Learning (PGDPHN-DL) 2011 12 months
Name of Program Year of Launch Program Duration	Post Graduate Diploma in Epidemiology – Distance Learning (PGDEPI-DL) 2012 12 months
Name of Program Year of Launch Program Duration	Post Graduate Diploma in Health Promotion – Distance Learning 2011 Under Project STEPS (Strengthening of Tobacco Control Efforts through Innovative Partnerships and Strategies) 12 months
Name of Program	Certificate Program in Research
Year of Launch Program Duration	Methodology - Distance Learning 2012 6 months
Name of Program	Post Graduate Diploma in
Year of Launch Program Duration	Management of Reproductive and Child Health Programs - Distance Learning 2013 12 months

Geographical distribution of PHFI graduates from Distance Education Programs courses Year 2012-2013







## \*Others (Post Graduate, MA/BA, BCom, BPH, Pharma) 2011 till 2013

# Our alumni are working in reputed Indian and international organizations.



# Batch profile of PHFI academic programs 2012-13



PGDPHM training helped me by improving my monitoring at the district level. I am able to handle the handicap program very well.

Dr. Kartik R. Shah 2008-09 Batch, PGDPHM

Before taking up PGDHEP program, for two years, I was in a field job. Though I had a long, enough public health exposure but this program helped me to come back to academics...today my current job involves revising policy documents for AYUSH sector, thus health policy been taught in a more analytical manner during the PGDHEP program, was of much use in my current job. **Dr. Venkatesh Vinayak Narayan** 2010-11 Batch, PGDHEP The one year PGDPHM is an intense program. The medley of doctors from various states and other health/non health professionals in the class has enriched the learning environment. Joining this course at IIPH gave me the required thrust to plunge into the field of Public Health.

Ms. Vibha Chabra 2010-11 Batch, PGDPHM



### Mr. Sameer M Bamnote 2008-09 Batch, PGDBDM



## Training

The Training Division at PHFI was started in 2008 with the aim of building capacity through short-term training programs in public health. There has been a steady growth in the number of both governmental and non-governmental trainees, with a 56 percent increase in 2011-12 and a 57 percent increase in 2012-13. Training sessions are conducted at the IIPHs and offsite at locations specified by the state governments.



- In Odisha, in December 2012, WHO, in collaboration with the Ministry of Health and Family Welfare and the Government of Odisha conducted a Capacity Building Workshop in the National Leprosy Eradication Program (NLEP) and other important health programs for senior state and district health officials. Participants included Director Public Health; Director Health Services; Team Leader (State Human Resource Management Unit); Joint Directors and Deputy Directors of national health programs like the National Leprosy Eradication Program, the Revised National TB Control Program, the Integrated Disease Surveillance Project, and the National Vector Borne Disease Control Program; consultants from the Technical and Management Support Team and WHO; and faculty of IIPH, Bhubaneswar.
- PHFI partnered with the National Rural Health Mission, Government of Uttarakhand, to conduct a series of training sessions in Haldwani and Dehradun on Infection Control Practices and Bio-medical Waste Management for 155 public health professionals and paramedical staff from the Uttarakhand Health and Family Welfare Department.

Under the PHFI-MEASURE Evaluation partnership, an international workshop on Strengthening of Routine Health Information Systems (RHIS) Management is scheduled to be held in September-October 2013 in New Delhi. The workshop has been designed for government and NGO professionals who are responsible for the management of health services and health programs at national and sub-national levels: for the management of RHIS; for the monitoring and evaluation of health programs; and also for the staff of technical assistance projects that aim at improving health system management.

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PHFI has developed a partnership • under the Public Sector Linkages Program (PSLP) with the Health and Family Welfare Department, Government of Uttarakhand, and the Nossal Institute for Global Health, the University of Melbourne, for a period of three years (January 2013 to December 2015). The project envisions building the capacity of the public health workforce in Uttarakhand by conducting Public Health Leadership training, Training Needs Assessment (of Medical Officers-Primary Health Centres and District Program Managers), for developing curricula in teaching

public health at the State Institute of Health and Family Welfare (SIHFW), and supporting partners to strengthen the SIHFW, Uttarakhand.

The Public Health Leadership and Implementation Program (PH-LEADER) has been set up through a collaboration between Emory University's Rollins School of Public Health, PHFI, and the National Institute of Public Health of Mexico (INSP). This consortium was established through a grant from the United States National Institutes of Public Health and the Fogarty International Center. This program aims to develop in-service public health professionals, to acquire strong leadership and applied skills in their fields of expertise, the ability to translate and implement innovations in research and programming into policy, research and practice, and to address the heavy and growing burden of non-communicable diseases in India.

### Building capacities of AYUSH professionals in public health

India has a rich heritage of traditional knowledge systems of Ayurveda & Sowa Rigpa, Yoga & Naturopathy, Unani, Siddha, and Homeopathy (AYUSH). Considering the emphasis placed on AYUSH under the NRHM, in future a significant number of AYUSH graduates will join the government public health sector, working mostly in peri-urban and rural areas. Training in public health for AYUSH personnel is an essential part of the education and Continuing Medical Education (CME) goals under the Eleventh and Twelfth Five Year Plans. Moreover, the High Level Expert Group Report on Universal Health Coverage for India recommends bridge-courses and Post Graduate courses in health program management, hospital management, public health, and primary healthcare for AYUSH doctors, so as to optimally utilize the AYUSH health resource within the public health system and to strengthen health sector management. The majority of our full-time and distance learning academic programs at the various IIPHs also cater to AYUSH

professionals. Additionally, short workshops have been conducted in partnership with the government exclusively for capacity building of nominated AYUSH professionals in public health sciences. In Karnataka, three six-day workshops have been conducted for orienting AYUSH doctors to public health in 2013. In 2012 AYUSH doctors were imparted training in public health management.. A total of 140 AYUSH professionals have received training and orientation as a part of a grant from the Department of AYUSH, Karnataka.

### Other Projects

Project Title	Funding Body
Development of a Post Graduate Level Measure & Evaluation Course for Master In Public Health Programs in South Asia	The University Of North Carolina at Chapel Hill and USAID
Capacity Building Workshop on rogramme Management & Evaluation In ublic Health	PHFI
Vorkshop on Project Management	PHFI
ssessment of Utilization of AYUSH Doctors' Services in Odisha	Directorate of Health Services and State Human Resource Management Unit, Odisha
Design Development and Evaluation of Video Games for Improving Cognitive Health	Institute of Nuclear Medicine and Allied Sciences, Ministry of Defence
Tablets to HSI for Blood Pressure, nemia, Temperature, Pulse Oxygen and lood Glucose	Healthpoint Services India Pvt. Ltd.







# Healing is a matter of time, but it is sometimes also a matter of opportunity.

Hippocrates

# Health Systems, Policy and Finance

According to the World Health Organisation, the building blocks of health systems are service delivery, information and evidence, health commodities such as medical products and technologies, health workforces, health financing, and leadership and governance. A responsive national health system delivers services to all of its citizens in a timely and effective manner. Its role is to maintain and promote health behaviors that improve the wellbeing of communities, families, and individuals. It provides equitable and quality service to everyone, regardless of their ability to pay for services, ensuring that families do not face medical bankruptcy.

Health systems research (HSR) is multidisciplinary and ideally

intersectoral, reflecting the experiences of stakeholders, ranging from health providers (public and private) and policymakers to recipients of care. According to the Alliance for Health Policy and Systems, HSR "involves the production of new knowledge to improve how societies organize themselves to achieve health goals." Strengthening India's health system will require a closer understanding of its key constraints: shortage of health workers, effective financing, insufficient infrastructure, and lack of proper monitoring for promoting evidence-based policies and decision making.

PHFI strives to produce evidencebased data through various descriptive, comparative, and evaluation studies and through secondary analytical research projects. Our activities are geared towards understanding the current situation of health human resources in the country, health governance, capacity building of frontline health workers and stakeholders in monitoring and evaluation activities (M&E), and creation of an enabling environment for adoption of Universal Health Coverage.

PHFI was invited by the Ministry of Health and Family Welfare to set up an Immunization Technical Support Unit (ITSU) to assist in strengthening the country's Universal Immunization Programme (UIP). .

## From Knowledge to Action, Turning Vision into a Reality: Reforming and Restructuring the Allied Health Sector

Addressing shortages in human resources for health is the first step towards expanding the reach of health services in underserved areas. Fulfilling India's mandate for UHC will depend on the availability of well-trained and gualified health professionals at the primary, secondary, and tertiary levels in both the private and public sectors. Allied health professionals (AHPs), otherwise known as paramedics in India, can help fill this need and gaps in health services. Although the definitions may vary per country, these health workers are generally involved in providing technical, diagnostic, therapeutic or direct patient care services, that are distinct from nursing, pharmacy, or medicine.

Strengthening and utilizing the allied health workforce is a step towards the goal of attaining an equitable, just, and patient-centered healthcare system. India has traditionally leaned towards doctor-centered healthcare delivery, with little attention paid to specialization in allied health sciences. Investing in allied health professionals has, however, at no point in history been so crucial to reforms in the public health sector as it is today.

In March 2011 the Ministry of Health and Family Welfare nominated the Public Health Foundation of India as its technical partner, and constituted the National Initiative for Allied Health Sciences (NIAHS) secretariat with the mandate to develop a framework to improve allied health training, education, and regulation in the country. The terms of reference set by the health ministry directed the NIAHS secretariat to map the allied health training landscape and the current regulatory framework for various allied health disciplines.

The final recommendations from PHFI, derived from multiple stakeholder consultation meetings with over 300 experts, field visits to the various centres of excellence, and a desk review encompassing nationwide materials and modeling activities, were formally presented and accepted by the Ministry of Health and Family Welfare. The report, From Paramedics to Allied Health Professionals, formally released by the Minister of Health and Family Welfare Mr. Ghulam Nabi Azad on December 21, 2012, documented vast inter- and intra-state differences, with public and private facilities struggling to cope with increasing human resource costs, shortages, uneven distribution, and skill-mix imbalances. There is also a need for reconfiguring and restructuring the allied health space, by creating dedicated national and regional institutes with the objective of nurturing talent, retaining allied health professionals, and providing a distinct career path.

The National Skill Development Corporation (NSDC) healthcare sector skill council, commissioned a follow-up study to quantify the industry perspective on skill gaps amongst AHP and its impact on employment opportunities in the private sector. Through a market-based demand analysis, the secretariat documented a huge industry demand for miscellaneous professionals such as general duty assistants and medical record technicians.

PHFI recognizes the need to realign India's human health resources with the growing demands of the country. In the light of India's struggle with a heavy disease burden coupled with socioeconomic problems, deficiencies in human resources — in terms of both skills and numbers — will be formidable barriers to healthcare sector reforms. It is of pivotal importance that these are overcome through initiatives that address both the scale and quality of the allied health workforce. One way to do this is to establish an interim regulatory structure in the form of a National Board for Allied Health Sciences (NBAHS). The Government of India has appointed PHFI as a technical and implementing partner in its creation. NBAHS will develop standardized internationally accepted nomenclature, incorporate skills- and competencies-based curricula, and define national occupational standards to further strengthen the allied health workforce.





# Human Resources for Health

If India is to provide Universal Health Coverage for its citizens, it must take stock of the strengths and weaknesses of its healthcare system. However, such stocktaking requires excellent research on health systems, which is sparse. The lack of both availability of datasets and standardization in variables continue to pose challenges in conducting largescale reviews of health systems in general. The challenge is greater because the health system comprises multiple stakeholders, such as medical care providers, medical research organizations, pharmaceutical and medical technology industry, and diagnostic and pathological laboratories.

Even in the absence of adequate research, it is clear that an important factor that impedes scaling up of health delivery systems is the less than optimal number of healthcare workers or human resources for health (HRH). Only in the last few years has there been a significant interest in the statistical impact of human resource



density on health outcomes. A report by Anand and Bärnighausen summarized 2004 WHO data (from a combination of 198 countries) to see the relationship between selected health outcomes and density of health workers (number of health workers per 1,000 population). The density of human resource for healthcare independently affects health outcomes such as maternal mortality and immunization, apart from other determinants of delivering quality healthcare. A similar study from Chen et al. (2004) also explored percentage of deliveries with skilled birth attendants and proportion of children immunized against measles with relation to density of human resources. They found an association between density of human resources with positive health outcomes and coverage levels. Chen et al. also posits that having fewer than 2.5 health workers per 1,000 population will not lead to minimum coverage levels (80 percent) for the above health indicators.

India's healthcare system is the second largest employer in the country after the education sector. It is also the largest service industry in terms of generating revenues. It is estimated that about four million people (general-duty doctors, medical specialists, nurses, dentists, and allied health professionals such as pharmacists, technicians, and frontline health workers) work in this sector. But are these numbers adequate for addressing India's health requirements? Managing and developing HRH is crucial in attaining the goal of Universal Health Coverage in India and in meeting the objectives of the National Rural Health Mission.

PHFI recognizes this need and is conducting various research and outreach activities aimed at understanding issues surrounding HRH such as shortages of capable workers; inadequate management, supervision, and monitoring skills; and lack of governance in posting, transfer practices and promotions of health officers. In this regard, People for Health: Advancing Human Resources for Health In India, is an initiative supported by the European Union under its "Investing in People" thematic program and implemented by PHFI. It seeks to offer solutions on critical health workforce issues through a strengthening of knowledge and crosslearning capacity enhancement, and research and advocacy at the national level and in two states, Kerala and Madhya Pradesh.

After conducting multiple stakeholder consultations, workshops, and training needs assessments, PHFI researchers have identified gaps in management capacity specifically in quality assessment, field data management, development and monitoring of block action plans, and use of Health Management Information System at the district level. We are also identifying case studies or best practices in HRH that can be scaled-up. One way to address the skills gap is to introduce short-term courses that are relevant to the work done by various cadres of the health workforce and build skills in some core human resource management areas. We are working

towards designing a certificate course in Human Resource Management in Public Health in the Distance Learning mode.

PHFI is also making concerted efforts in understanding governance decisions. Despite widespread acknowledgement that informal and inappropriate posting and transfer practices have a significant impact on health services and outcomes, little is known about this complex adaptive system. What is known is that it has led to some skewed distribution of human resources. Rural areas account for about three-fourths of the country's disease burden but only have oneninth of the total number of hospital beds, and only one-fourth of health human resources. Urban areas have better accessibility to healthcare, as can be seen from the availability of hospital beds and healthcare resources. The availability of effective beds in vulnerable areas is further compromised by shortages of healthcare staff or hospitals that are not equipped to deliver care. Effective governance can reduce inequitable distribution of health workers in urban and rural areas.

## Ensuring each child becomes a VIP: Vaccinated, Immunized and Protected

It is estimated that three million children under the age of five, die each year of vaccine-preventable diseases (VPDs) in developing countries. India has the largest birth cohort in the world with around 27 million new births every year. Of these, fewer than 44 percent receive the full schedule of immunization so crucial in battling child mortality. This is in stark contrast to Bangladesh, which has managed to raise its child immunization rate to 82 percent by age two, and Nepal where at least 80 percent of children are fully immunized by that age. Although India's under-five mortality has declined from an estimated 114.3 per 1,000 births to an estimated 62.6 per 1,000 births between 1990 and 2010, in child survival, India still lags behind other countries with similar GDP. Recent immunization coverage surveys in India have shown a gradual progress in the performance of routine immunizations (RI) over the last few years, but in some states the coverage is still quite low. Six states with high population contribute to 80 percent of 8.1 million unimmunized children in the country; 52 percent of the total unimmunized reside in Uttar Pradesh and Bihar.

Several new initiatives like introduction of hepatitis B vaccine, second dose of measles vaccine and pentavalent vaccine (two states), JE vaccine rounds, and framing of the National Vaccine Policy are welcome steps. The challenges and barriers to achieving high immunization rates are well recognized. The near non-existence of an effective VPD surveillance system in the country has further compounded the problem. There is an urgent need for induction of innovative methods, proper monitoring of programs, improving operational efficiency, reaching every community, integrated delivery of health interventions along with immunization, development of an efficient VPD surveillance system, monitoring of adverse events following immunization (AEFI), and postmarketing surveillance systems.

The decades old Expanded Program of Immunization (EPI), which was adopted in India as the Universal Immunization Programme also needs a revamp with the inclusion of certain new vaccines. Decisions on implementing new and underutilized vaccines require scientific evidence and data, a reliable supply of affordable vaccines adapted to the country's immunization schedule, and an integrated disease monitoring and surveillance system.

The Ministry of Health and Family Welfare invited PHFI to set up an Immunization Technical Support Unit to assist in strengthening the Universal Immunization Programme. ITSU provides the management and technical expertise required to create a stronger immunization program fully led by the Government of India. The principal beneficiaries of this work are the Government of India (primarily MoHFW and UIP), state governments, and all parties involved in increasing routine immunization quality and coverage for India's children. Some of the core activities of PHFI are setting up ITSU and providing the MoHFW

with guidance on revamping the organizational structure of UIP and a strategy for its relaunch.

To further help contribute to datadriven and informed policymaking, PHFI is conducting an evaluation study and a thorough assessment of the benefits and challenges of introducing the pentavalent vaccine in India, supported by the Global Alliance for Vaccines and Immunization. PHFI will also undertake a prospective assessment of the coverage and impact of pentavalent immunization in India. In addition, a situational analysis of the pneumococcal conjugate vaccine (PCV) market is currently underway to generate evidence on facilitators and bottlenecks in its utilization in the private healthcare market in India. The introduction of the PCV in the UIP and providing immunization at current DPT3 coverage levels can prevent an estimated 3.2 lakh deaths caused by bacterial acute lower respiratory infection and meningitis.

PHFI has also conducted research in Uttar Pradesh on the government expenditure trends to provide an insight into why large cohorts of children remain unvaccinated. Consultation with various stakeholders and community perspectives were conducted and documented. Best practices and strategies from high performing districts within the state were also documented.

The Certificate Course in Immunization Practice (CCIP), another capacity building initiative started by PHFI, is designed to enhance the knowledge, skills, and core competencies of medical practitioners from urban and peri-urban areas on immunization. The course also aims to establish a network of these medical practitioners for exchange of knowledge.

PHFI believes that strengthening and bolstering the UIP machinery with the capacity to ensure high rates of RI is an essential step towards reducing India's under-five mortality rate.

### Strengthening health systems through effective evaluation

An evaluation of health initiatives and interventions is essential to gauge whether current inputs are improving health outcomes and a program's effectiveness. The key components of a good evaluation, such as proper data collection and analytics and identifying good management practices, can contribute to effective asset or human resource allocation, which is especially critical in resource-poor or underserved areas in the country. Periodic assessments can become tools for leaders to adapt and respond to the evolving needs of its citizenry.

PHFI, in collaboration with the Bill & Melinda Gates Foundation, is conducting an evaluation of Family Health Initiative Bihar (also known as the Ananya program), which employs an integrated demand-and supply-side approach to reducing maternal and child mortality, as well as improving key nutrition and health outcomes. The evaluation has several components that provide information for successful scaling up, impact assessment, and a cost-effectiveness analysis of the activities and interventions. This evaluation will provide critical information and guidance to the Government of Bihar and various stakeholders and thus help in making program improvements and scaling-up innovative health delivery models.

Effective health systems need an educated and skilled workforce. PHFI has conducted capacity building exercises that enrich the knowledge and toolkits of frontline health workers. especially their ability to evaluate, analyze, and interpret and communicate information. PHFI's Training Division has established a partnership with MEASURE Evaluation, University of North Carolina, to develop and implement capacity building programs in Monitoring and Evaluation for the Southeast Asia Region. These training programs are conducted for health professionals involved in M&E activities, routine health information systems, and in the areas of impact evaluation and geographic information systems (GIS). The partnership also provides technical support to government and public health organizations. Eleven international and national workshops on impact evaluation of public health nutrition and HIV and AIDS programs, and GIS application in public health have been conducted since 2012. The workshops have been attended by 240 participants from the Southeast Asian Region. Through these training sessions, those in the field are better equipped to communicate the challenges, ground realities, and the opportunities for change that they encounter in their day-to-day work to stakeholders and policymakers.

PHFI is also in the process of developing a virtual certificate course on Monitoring and Evaluation of Health Programs.



## Health Systems and Policy

# Access, Bottleneck, Costs, and Equity (ABCE) project

The ABCE project, being conducted in collaboration with the Institute for Health Metrics and Evaluation, is a multicountry initiative to collect and analyze costs and constraints information on public health facilities. In India, PHFI will organize the collection of primary data at a range of health facilities across five representative Indian states. By providing quality evidence for improving the equity and costeffectiveness of health systems, it will help develop the next generation of tools to inform equity-focused policy and strategy choices by simultaneously considering both supply and demand. The results of this study, which will be available in the public domain, will support policymakers and national stakeholders who are involved in planning, prioritizing, and evaluating universal access to health systems. The project will be conducted in Andhra

Pradesh, Gujarat, Madhya Pradesh, Odisha, and Tamil Nadu. Data collection has been completed in two states and is being planned for the remaining states.

### Centre of Excellence in Alcohol Control (COE-AC)

To combat the alarming health consequences of growing alcohol consumption in India, there is an urgent need to establish policy priorities for alcohol control and shape an evidence-informed alcohol policy. In this context, an important initiative is an Indo-Swedish collaboration in the field of public health and alcohol policy that will lead to the establishment of a CoE-AC. This is being jointly implemented by the Public Health Foundation of India and its partner, HRIDAY, in collaboration with the Swedish National Institute of Public Health (SNIPH). The project aims to foster strategic partnerships with key organizations which have

extensive experience and expansive outreach in community-based health programs and health advocacy. The purpose of the centre is to strengthen research, capacity building, advocacy, and policies relating to alcohol control in India.

### Identifying operational pathways for integrating National Disease Control programs

The goal of Universal Health Coverage, a widely shared global health agenda, is to ensure that all people obtain the health services they need without suffering financial hardship when paying for them. The UHC policy for India aims to meet the healthcare needs of its population thorough a publicly financed scheme. This effort may, however, be hindered by a weak public health system. India currently has 13 disease control programs under

the National Rural Health Mission to address primary healthcare delivery. However, many interventions remain fragmented due to the vertical nature of the programs, resulting in replication of services and the lack of an organized task-sharing system to maximize limited resources. As the country moves towards implementing a larger framework for UHC, the nature and distribution of existing health programs must be taken into account. PHFI is playing an important role in identifying operational pathways for accommodating and integrating National Disease Control Programs within the framework for UHC. Such integration can resolve health system inefficiencies and forms a key component in implementing UHC. It is essential both for setting health priorities for UHC and for sharing of data that will determine key components of the National Health Package.



### Developing an essential health package for primary healthcare services in states

As India gets set to rollout the UHC initiative, the phased approach advocated in the Twelfth Five Year Plan is necessary for many reasons. All the states are not in position to bear the expenditure required for implementing UHC and the other fiscal implications.Therefore, initially only tier one states will implement it.

The phased approach is also necessary for ensuring that the design and implementation of UHC are sensitive and properly aligned to deal with the challenges of a vast population and geographical diversity. UHC must also strike a balance between pre-existent and future investments. A phased approach with a series of pilot projects would provide a good scope for learning and for improving the scheme. Since health is a state subject, the states need to undergo preparation to understand the fiscal implications of the scheme, be equipped with the ability to plan and manage the implementation of the scheme, and further contextualize it based on their requirement. The preparation and piloting experience of a few states will provide learning lessons for scaling up the scheme in the rest of the states.

The Planning Commission's approach

paper to the Twelfth Plan on health proposes a series of pilots (in all states) that will rollout an essential health package for UHC to begin incremental coverage within this plan period. PHFI proposes to inform the process of the UHC rollout through research, consultation, and technical assistance. PHFI's work will build on the Planning Commission document on the next steps for progression of UHC in India. It will balance the benefits of existing institutions and frameworks against the new investments needed to implement UHC. India's vast population, geographical diversity, and health inequities imply that there is no single path to achieve UHC for India. In order to simultaneously ensure for the poor and vulnerable equitable access to health as well as protection against catastrophic healthcare costs, India will need to determine an appropriate balance between prioritizing primary health and expanding access to insurance for secondary and tertiary care, which have the potential to cause financial harm to households paying out-of-pocket.





# Nodal institution for health policy and system research

The increasing importance of health systems research in improving the effectiveness of health systems, has highlighted the need for appropriate research for improved program implementation and informed policymaking. There has been a growing interest in developing regional and national platforms for bringing health systems researchers together to focus on making their research more relevant and usable by policymakers.

WHO's Implementation Research Platform and the Alliance for Health Policy and Systems Research are establishing Nodal Institutes in select countries and regions. As the Nodal Institute for India, the Public Health Foundation of India is engaging with relevant academic/research institutions towards (a) developing capacity in HPSR; (b) mapping of health systems research in the relevant geographical areas; (c) convening national/regional level meetings to bring together policymakers, researchers, and other stakeholders; (d) promoting the use of HPSR and Implementation Research towards achieving health goals; and (e) working with relevant stakeholders to scale-up effective interventions. The project activities also include providing support to young health systems researchers through mentorship and small grants.

At a national-level consultation on promoting health systems research held in New Delhi, policymakers, researchers, program managers, and other stakeholders from across the country came together for a day-long discussion. Policymakers indicated a strong interest in investing in HSR. In addition, PHFI conducted a review of health systems research undertaken on and in India over the last eight years.

# Developing case studies of innovations in public health

The overall goal of the project is to strengthen institutional capacity for accelerating the decline in the maternal mortality ratio and, over time, to sustain a very low maternal mortality regime through appropriate technical, programmatic, and organizational responses. Institutional capacity with respect to competence and advocacy aimed at improving maternal health, will be strengthened by developing and using high quality case studies of successful innovations. The objectives of the project are: (a) development of case studies through print and audiovisual documentation of innovative experiences in public health that provide important learning for public health practice, with a focus on improving maternal health; (b) incorporation of these case studies as teaching /training materials in the curriculum of not only PHFI and its network of Indian Institutes of Public Health, but also those of medical and nursing colleges and other public health institutions for public health professionals, as well as the in-service training programs of government at state, district, and facility levels and those run by non-governmental organizations; and (c) utilization of these case studies for advocacy with senior policymakers, program managers, and professional leaders.

The project activities have all been completed successfully. Twenty three case studies of innovations along with films were disseminated to nearly 200 participants over five workshops across India. All the case studies were put together as a manuscript, which was accepted and approved by a peer reviewer. The book is expected to be published by November 2013. A scaling up exercise will also be undertaken.

### Preparing states in India for Universal Health Coverage

The focus of this project is on the rollout of UHC in select Indian states, through research, consultations, and technical assistance. Through this project, PHFI intends to develop a benchmark to start UHC implementation, develop an essential health package, provide fiscal need projection, investigate the preparedness of grassroot level institutions for Universal Health Coverage and facilitate their community oversight, and advise UHC-ready states on governance reforms. The Grassroots Organizations component also includes implementation of an institutional support package for village health committees in Tamil Nadu, under the VOICES implementation research project in partnership with the World Health Organisation, the National Rural Health Mission, and the National Health Systems Resource Centre.

### Disease Control Priorities Network (DCPN)

The objective of DCPN is to produce definitive technical publications, based on extensive analytical work and consultations with technical experts and policymakers from around the world, to inform national and global level health policymaking. DCPN aims to improve the allocation of health resources across a wide range of investment options, including interventions, service delivery platforms (e.g. community health clinics, hospitals, public health services), and research and development of new health technologies.

The third edition of Disease Control **Priorities in Developing Countries** (DCP3) will provide the most up-todate evidence on intervention efficacy and program effectiveness for the leading causes of global disease burden. It will go beyond previous efforts by providing systematic economic evaluation of policy choices affecting the access, update, and quality of interventions and delivery platforms for low- and middleincome countries. DCP3 will introduce new extended cost-effectiveness analysis (ECEA) methods to assess the equity and financial protection considerations of health and macroeconomic policies for extending coverage of proven effective interventions to prevent and treat infectious and chronic diseases, including conditions related to environmental health, trauma, and mental disorders.

### Training, technical assistance, and measurement of the institutional impact of infection control practices

Although one of the cardinal principles

of hospital care is that it should cause no harm to the patient, many patients acquire infections while in hospital . The reasons for this include poor environmental sanitation and overcrowding in hospitals, invasive procedures, longer length of stay, compromised immune status of patients, and failure of healthcare workers to wash their hands between patients or before procedures. This project aims to enable hospital representatives to manage infection control independently; gather accurate surveillance and cost data to demonstrate the favorable economics of investing in an infection-control program; conduct appropriate dissemination, leading to setting of national norms and policy changes on infection-control practices; and to serve as a starting point for the establishment of a national data repository on patient safety and quality metrics.



# Other Projects

Title	Funding Body
Developing Case Studies of Innovations in Public Health for Competency Strengthening and Advocacy	MacArthur Foundation
Evaluation of the Bihar Family Health Initiative	Mathematica Policy Research Incorporated and BMGF
PHFI Annual Urban Health Landscape Report	PHFI
Organization's Evaluation of a Project to Deliver Comprehensive Sexual and Reproductive Health Information and Services to Young People In The State of Gujarat	Macarthur Foundation
Setting Priorities in Health - A Reasoned Approach	IDRC
India Research Site Landscape Analysis	BMGF
Health Governance Hub	Oxfam India
Health Governance for Universal Health Coverage India	Deloitte Touche Tohmatsu India and Department of International Development
Perceptions of Health Decision-Makers Regarding WHO Regional Governance in South East Asia	The Royal Institute of International Affairs
Study on Technical Assistance to Ministries of Health	WHO
Pensions, Health and Wellbeing of Older People In Developing Countries: Insights From The WHO Sage ( Study On Global Ageing And Adult Health) Survey	University Of East Angila Of The Registry & National Council Research Institute Of Neuroscience
Strengthening Immunization Services In India.	The Regents Of The University Of Michigan
Human Resource For Health: Policy Framework	Karnataka State Health System Resource Centre, Government Of Karnataka
Developing Innovative Methods to Enhance the Utility of the Health Information System of India in Understanding Disease Burden and in Evaluating the Impact of Population Health Intervention	Indian Council of Medical Research
# Other Projects

Title	Funding Body
Evidence for Policy and Implementation - Intensifying Efforts to Achieve Health-Related MDGs in Four Countries with Developing Economies (Epi-4)	Karolinska Institute
Development of National Occupational Standards for Job Roles in Allied Healthcare and Paramedics	Accenture Services
Health Promotions: Physical Activity and Aging [Research Fellowship to Dr Josyula K. Lakshmi (Fellowship - 2012)]	Indo-U.S. Science and Technology Forum
Assessment of Free Medicine Initiative In Rajasthan	World Health Organization
Prepare A Report On Sha 2011 Workshop In Bangkok	World Health Organization
Churachandpur District Hospital Performance Improvement Project	MOHFW, Government of Manipur
Universal Health Coverage as a Sustainable Development Goal: Thematic Working Group of the United Nation's Leadership Council	IDRC





If we don't create the future, the present extends itself

Toni Morrisson

# Non-Communicable Diseases

Non-communicable diseases (NCDs), pose major health and economic challenges for low- and middle-income countries (LMICs) such as India. In fact, according to WHO, 80 percent of NCD deaths — 29 million — occur in LMICs.

These diseases affect South Asians in the prime, economically active age range (25-64), and as a result, human capital losses and high medical expenditures stifle economic development and perpetuate poverty, not just for the individual victims and their families but also for the nation. Premature mortality and lost productivity due to cardiovascular and diabetes deaths have resulted in US\$267 billion in national income losses for India in the past decade. Individuals with diabetes, for example, spend 10 to 25 percent of the household's income on care, thus

diminishing opportunities for other activities, such as children's education.

Cardiovascular diseases, cancers, respiratory diseases, and diabetes account for around 80 percent of all NCD deaths worldwide. All of them, and most of the other NCDs, have common risk factors: tobacco use, physical inactivity, the harmful use of alcohol, and unhealthy diets.

Since these are all controllable lifestyle factors, they are potentially amenable to prevention. In order to implement effective interventions, it is important to understand the patterns of lifestyles and health behaviors, the individual and societal level factors associated with these behaviors, and how macro transitions (economic, demographic, nutrition, cultural) across India are affecting these patterns. PHFI is actively working towards combating NCDs in India through surveillance of NCDs, preventive programs, developing care models (including the use of health technologies), capacity building in research and patient care, and policy advocacy.

# Reducing the public health burden of diabetes

Type 2 diabetes is now a common and serious global health problem. In most countries, it has evolved in association with rapid cultural and social changes, aging populations, increasing urbanization, dietary changes, reduced physical activity, and a pattern of other unhealthy lifestyle behaviors. India has the highest number of people with diabetes in the world, with an estimated 50.9 million in 2010 and predicted to increase to 80 million by 2030. Recognizing the huge burden of the impact of diabetes on the country's health system and economy, PHFI has been actively involved in generating relevant epidemiological data for informed policy decisions and capacity building for care delivery and research.

PHFI is implementing a comprehensive diabetes prevention and management research program, UDAY, in two districts –in Vizag in Andhra Pradesh and Sonipat in Haryana. The study will determine the following:



- the prevalence of diabetes and hypertension,
- knowledge about both conditions among the general population and patients,
- healthcare providers diabetes and hypertension management practices,
- access to diabetes and hypertension treatment,
  - (PHFI will subsequently implement and evaluate a multicomponent, multilevel, comprehensive intervention program to improve the prevention, detection, and management of diabetes and hypertension.his was a bulleted item – have changed)
- It will involve the following:
- public education using social marketing strategies,
- targeted screening,
- tailored patient education,
- task-shifting to community health workers,

- healthcare provider training in evidence-based guidelines,
- quality improvement program,
- use of low-cost m-health technology,
- advocacy to improve access to care

The program, encompassing the whole continuum of care from prevention to management, will not only improve healthcare outcomes but also provide key insights into care pathways that can be scaled up to improve diabetes and hypertension management in India.

To build human resource capacity in diabetes management, PHFI has successfully conducted a Certificate Course in Evidence-Based Diabetes Management, a uniquely designed once-a-month training program for physicians at primary and secondary care levels. The objectives of the course are to develop core skills and competencies among physicians for the practice of evidence-based diabetes management. Nearly 3,000 primary and secondary care physicians have successfully trained under this program and another 2,500 physicians are being trained currently. Further, PHFI has just begun another on-job-training program (Certificate Course in Gestational Diabetes Mellitus) to develop core skills and need=based competencies in primary care physicians, obstetricians, and gynaecologists for the practice of Gestational Diabetes Mellitus Management.

# Providing evidence for promoting better lifestyles and reducing cardiovascular risks

Cardiovascular diseases (CVDs) are responsible for approximately onethird of deaths worldwide. The risk factors for CVD — primarily abnormal blood fat, high blood pressure, obesity, diabetes, physical inactivity, poor diet, and smoking — continue to increase disproportionately in several regions of the world. Less developed countries are experiencing these diseases at younger ages and increasingly in lower socioeconomic groups.

In India, CVDs alone cause nearly two million deaths annually and account for around one-fourth of all deaths. Between 2005 and 2015, India is projected to cumulatively lose US\$ 236.6 billion because of heart disease, stroke, and diabetes, an amount equivalent to 1 percent of the GDP. In 2000, India lost 9.2 million years of productive life among individuals in the age group of 35 to 64, almost six times the figure for the United States.

Research is needed to generate evidence to frame policies aimed at conducting a crusade against these

diseases. The Public Health Foundation of India is undertaking several research and capacity-building initiatives aiming at CVD risk reduction. These address the dearth of research capacity, inadequate surveillance data, gaps in implementation of proven interventions, as well as heterogeneity in access and care delivery for cardiovascular diseases in the region. The Future Faculty Programme of PHFI has identified and trained several doctoral-level researchers in epidemiology, health system research, and implementation research, with special focus on CVDs. PHFI's Centre for CArdiometabolic Risk Reduction in South Asia (CARRS) is one of the 12 Centres of Excellence in Global Health Activities in Developing Countries to Combat Non-Communicable Chronic Cardiovascular and Pulmonary Diseases identified and funded by the National Heart Lung Blood Institute and the United Health Group. As part of this ongoing initiative, PHFI has designed and implemented several

landmark epidemiological studies, such as the CARRS Surveillance study (a cohort-modeled population survey of 16,000 adults in three metropolitan cities in South Asia) and the Solan Surveillance study (covering 40,000 adults in rural Himachal Pradesh), which aim to develop a model surveillance system for cardiometabolic diseases in developing country settings.

PHFI has also been actively involved in developing strategies that reduce cardiovascular risk at the population level in India. PHFI has designed a three-year project entitled 'Developing the evidence base for a national salt reduction program for India' with the overall goal of forming the development of a national salt reduction strategy for India. The objective is to conduct an integrated, multifaceted research program consisting of qualitative stakeholder assessments, quantitative population surveys, and food supply evaluations



that will provide the baseline data, leading to development of a national salt reduction strategy, which can be translated into policy and practice.

Recognizing the relatively poor adherence to cardiovascular risk reduction therapies, PHFI has tested and proved that a low-cost fixed dose combination therapy (Polypill targeting blood pressure, lipids, and platelet activity) is effective in improving adherence to therapy and reducing cardiovascular risk. This study, the UMPIRE trial (Use of a Multidrug Pill In Reducing cardiovascular Events), was conducted in 28 Indian sites among 1,000 individuals with high risk for cardiovascular diseases. PHFI has also developed and implemented the CARRS translational trial for application of evidence-based care/ strategies for prevention of cardiovascular events in real life settings. This trial tests a lowcost care delivery model (nonphysician care coordinator and decision support software) in India to achieve comprehensive cardio-metabolic disease case management of 1,146 high-risk patients at nine heterogeneous sites across India.

# Addressing mental health needs through effective promotion, prevention and intervention

Mental, neurological and substance use disorders (MNS) are a leading cause of the burden of disease in South Asia, as well as the rest of the developing world. Notable examples of MNS disorders, in terms of the burden of disease, include: autism, mental retardation and epilepsy in childhood; depression, psychoses and alcohol use disorders in adulthood: and dementia in old age. They exert potent negative effects on individuals and families, adversely impact the youth as well as older persons in their ability to perform well in their life, and, in aggregate, produce more disability worldwide than any other class of disease. Although it has huge public health significance, mental health remains a perplexing area to deal with as far as cure and rehabilitation is concerned. In India there has been renewed interest in mental healthcare, with the completion of the process of revising the Indian Mental Health Care Act by the Ministry of Health and Family Welfare. Moreover, a Mental Health

Policy Group was established by the government in May 2011 with the goal of redesigning the National Mental Health Programme and writing India's first National Mental Health Policy.

PHFI places its Centre for Mental Health (CMH) as the leading advocate in research, capacity building, and systems strengthening in the field of mental health services. The primary mandate of CMH is to raise awareness and strengthen research, training, and education in this high priority area of public health in India. It is actively involved in identifying and bridging the gaps in treatments of mental health disorders. According to recent estimates up to 90 percent of people with MNS disorders do not receive evidence-based care through the primary healthcare system in developing economies such as India.

Following the tutelage and the proficiency of PHFI's core expertise in decreasing the burden of diseases through research, CMH weaves together collaborative projects funded by various international funding agencies and coresearched by internationally acclaimed research and academic institutes. PHFI closely engages with governments and policy groups to ensure that the centre supports excellence, accountability, strategic planning, and assistance with policy formulation pertaining to mental health.

Apart from promoting advanced evidence-based practices using dissemination and demonstration projects, PHFI creates a public-private partnership to guide their implementation and improve as well as expand the workforce providing evidence-based mental health services and support. The premise that there is a huge disparity between the prevalence of the disease and availability of resources and access to mental health services, calls for a renewed positioning of MNS disorders in the overall list of global burden of diseases.

Vidarbha in Maharashtra, has often been in the news because of frequent farmer suicides there. An area adversely affected by agricultural crises, the Vidarbha region had no comprehensive, community-based efforts to address psychosocial distress or mental disorders. PHFI is supporting the Vidarbha Stress and Health Program (VISHRAM), a four-year community-based initiative to promote mental health and manage mental health disorders in communities by building partnerships with local institutes and NGOs operating in the region. Research investigators, led by PHFI, assess mental health needs and resources for the provision of mental healthcare, train health workers in various aspects of psychosocial and mental healthcare, and deliver evidence-based psychosocial and mental health interventions. Health counselors from partner organizations have been trained to deliver counseling treatment to people with depression and drinking problems. As many as 400 patients have been treated so far in the outreach clinics organized every

month in. Awareness meetings conducted by community health workers have been attended by more than 1,000 people over the last one year, helping people fight stigma and also access treatment for mental illnesses.

Adhering to policy and practicerelevant research, the Programme for Improving Mental Health Care (PRIME), a six-year research program consortium under PHFI, funded by the U.K. Department for International Development, aims to develop, evaluate, and scale up a mental healthcare plan in primary and maternal healthcare in districts in India. and other South Asian and some African countries. PHFI recognizes that developing an integrated mental healthcare plan for delivery with primary and maternal healthcare is the best way to reach a larger number of people in need, most of who live in the rural areas. Evaluating the feasibility, acceptability, and impact of the packages of mental healthcare in primary healthcare and then scaling

this at the district level is being successfully implemented in specific research sites. PRIME has completed data collection through a communitylevel detection survey in June 2013. It conducted the survey in 44 clusters of Sehore in Madhya Pradesh, interviewing 1,365 participants. Data collection through a facility-level detection survey started in August 2013.

Pilot implementation of packages of the mental healthcare plan prepared by PRIME India has started in Sehore at the Bilkisganj Community Health Centre and the Bamulya Primary Health Centre. Pilot training on mental health for ASHA (Accredited Social Health Activists) workers and medical officers was conducted in June while one training session for paramedical staff was conducted in September along with community mobilization and a sensitization workshop.

The South Asian Hub for Advocacy Research and Education on Mental Health (SHARE), a five-year program on research and capacity building in

the South Asian region, funded by the National Institute of Mental Health (NIMH), adapts the Thinking Healthy Program for peer-delivery. The program builds an evidence base on the role of peers in the delivery of mental healthcare by developing and evaluating the impact of a peer-led psychological treatment for maternal depression which impacts both maternal and child health outcomes. The SHARE consortium has successfully developed a platform for online mentoring aimed at training professionals. Over the last one year 61 in-depth interviews and four focus group discussions have been successfully completed, adhering to SHARE's key idea of using Implementation Science for public health interventions. Other interventions include studentships, fellowships, distant learning programs, a course on global mental health, and a two-year course launched in April 2013, which aims to produce a cohort of researchers able to make a significant contribution to mental

health research in the humanitarian context in the South Asia region.

Another project, Emerging Mental Health systems in Low and Middle Income Countries (EMERALD), works towards improving mental health outcomes by enhancing health system performance. Specifically, EMERALD aims to identify key health system barriers to, and solutions for, the scaled-up delivery of mental health services in low- and middle-income countries and by doing so improve mental health outcomes in a fair and efficient way and move to universal health coverage. Project EMERALD has the potential to pave the way to designing for a mental health delivery system which is self-sustainable and find solutions for the scaled-up delivery of mental health services in LMICs.

The China-India Mental Health Alliance, an initiative funded by the China Medical Board, will build partnerships between leading mental health researchers and advocates in China and India around priority areas related to MNS disorders. This project is under advanced stages of initiation.

In summary, the treatment gap for mental health conditions is far greater than that observed for people living with physical health problems. Empirical evidence suggests that people with severe mental illness die earlier, due to both suicides and poor quality medical care. Studies also show that there is a two-fold increased risk of depression in people with heart disease. All this evidence calls for a renewed view of mental illnesses as one of the most important constituents of NCDs.

# Working towards a tobacco-free society

Tobacco use is a global epidemic and a serious public health challenge for developing countries. Smoking kills one million people in India annually. The consumption of tobacco will continue to kill millions of people every year unless urgent, novel, and dramatic steps are adopted to curb the menace. Tobacco affects our health, economy, and environment. According to a Global Adult Tobacco Survey (GATS) India conducted in 2009, 35 percent of adults consume tobacco in some form or the other, with most of them (21 percent) consuming smokeless tobacco. In India, the problem of tobacco is unique because myriad varieties of tobacco products are available. Its easy access has led to increased use among adolescents and children.

Owing to the complexity of the tobacco pandemic, we need to develop a multipronged strategy with active engagement and capacity building within settings like community, health systems, and schools, along with tobacco control policy measures addressing both the demand and supply side. Engaging media and advocacy beyond the health sector are integral to a comprehensive tobacco control approach due to multisectorial determinants influencing tobacco use.

One of the main mandates of the Division of Health Promotion and Tobacco Control at PHFI is preventing tobacco uptake and promoting tobacco control across the entire demographic and socioeconomic spectrum. The focus of the division is on the following activities:

- conduct evidence-based research
- influence key decision makers through advocacy efforts
- build capacity of various stakeholders
- support the government in policy development for tobacco control

#### Research

**STEPS** (Strengthening of Tobacco control Efforts through innovative Partnerships & Strategies)

The Division of Health Promotion has received a grant from the Bill & Melinda Gates Foundation (October 2009 to October 2013) to pilot project STEPS in Andhra Pradesh and Gujarat. Community intervention under this project reached a population of 11.6 million in the two states. This was achieved through successful partnerships with 15 NGOs covering 11 districts. At the primary healthcare level (Health Systems) around 1,175 medical officers and 3,473 allied health professionals have been trained to practice brief intervention advice for tobacco cessation.

District resource hubs were established in each district to make available a resource person for tobacco control training in the locality. The hub constituted medical college professionals, district health officials, and medical officers. Within the school setting, as part of empowering youth for tobacco control, 1,008 teachers and 5,292 student peer leaders from 884 schools from the two states were



trained to carry out intervention activities.

Economic studies were undertaken as a part of two projects: 'A state-level analysis of India's Fiscal Policies for Tobacco Control' and 'A Health-Cost Study to estimate the economic burden due to tobacco related diseases at National and sub-national levels in India'. The objective was to:

- examine the effectiveness of various fiscal measures to control tobacco consumption by exploring price and income elasticity, substitution effect and other factors;
- explore alternative livelihood opportunities for the workforce engaged in bidi rolling and tobacco off-farm activities; and
- undertake comparative analysis of the income, cost of production, and market support mechanism available to farmers growing tobacco and to those growing alternative crops.

## Evaluation of National Tobacco Control Program (NTCP)

The Division of Health Promotion also led an independent evaluation of NTCP commissioned by the Ministry of Health and Family Welfare. This evaluation was carried out from December 2012 to February 2013 in 10 out of the 21 Indian states where the program is being implemented: Delhi, Uttarakhand, Bihar, Assam, Odisha, Rajasthan, Goa, Gujarat, Andhra Pradesh, and Tamil Nadu.

The major objectives of the evaluation were to assess the impact of NTCP implementation on prevalence of tobacco use, the level and extent of implementation of activities under NTCP, and to identify the successes, challenges and gaps in the implementation of activities.

#### Capacity building

PHFI's capacity building programs like a short course in tobacco control and a Post Graduate diploma in health promotion and tobacco control for various stakeholders has been a unique initiative — delivered for the first time in India through the e-learning platform. Altogether 139 students from various disciplines have enrolled in the short-term course and 32 have completed the Post Graduate diploma in health promotion since May 2011.

#### Advocacy

#### Tobacco-free movies in India

The division conducted a unique study among nearly 4,000 students aged 12–16 years, from 12 schools across New Delhi to assess the following:

- Their ever tobacco use (using tobacco once or more in a lifetime) status
- Their receptivity to tobacco promotions
- Their exposure to tobacco use in movies

The study shows that the chances of ever tobacco use among students who were highly exposed to tobacco use occurrences in Bollywood movies were more than double as compared to those with low exposure.

PHFI advocated with the Ministry of Information & Broadcasting (I&B) and MoHFW on issuing guidelines for depicting tobacco use in films. The legal team at the division assisted MoHFW in framing a draft notification while resolving some concerns of the Ministry of I&B.Due to the persistent advocacy efforts by HRIDAY and PHFI, the government issued a notification on new rules regulating the depiction of tobacco products and their use in films and television in November 2012.

#### **Smokeless Tobacco Ban**

Gutka consumption is predominant along smokeless tobacco products available in India. The governments of 22 states and 4 union territories have banned the sale of gutka and other chewing tobacco products. The Health Promotion division at PHFI has played a crucial role in engaging key decision makers, civil society groups, and members of the public through



consultation forums and outreach to fight for the cause against tobacco. PHFI organized the first national consultation on Smokeless Tobacco in April 2011. Subsequently, PHFI advocated with state governments to notify this ban under the FSSAI (Food Safety & Standards Authority of India) 2011 Act.

# Setting global tobacco control priorities with focus on LMICS

PHFI and HRIDAY will host the International Conference on Public Health Priorities in the 21st Century: The Endgame for Tobacco from September 10-12, 2013, in New Delhi, with support from various national and international partners including the MoHFW and WHO. The conference endeavors to provide a platform for discussing principal endgame proposals being introduced in some developed countries and developing an action plan for LMICs.

These are being referred to as Endgame Strategies. A way forward would be to adopt a cohesive policy environment combined with evidencebased community action to promote public health which will aim to lower the prevalence of smoking to less than 5 percent by 2040 and set global and country-wise targets to protect present and future generations from the harmful effects of tobacco use.

# Scientific monograph on smokeless tobacco and public health in India

The division has taken the lead in developing a scientific monograph on highlighting the burden of smokeless tobacco in India. The scientific editors for this monograph include (Prof. K Srinath Reddy ,Dr. P C Gupta, Dr. Samira Asma ,Dr. Dhirendra Sinha)Dr. Monika Arora from PHFI's scientific secretariat is one of its technical editors.

This effort is in partnership with Healis-Sekhsaria Institute for Public Health, WHO, CDC, and NCI. The report will showcase the latest data from recent surveys and epidemiological studies, describe toxicity analysis and findings, and provide a comprehensive scientific perspective on the constituents, prevalence, morbidity, and mortality rates associated with the many varieties of smokeless tobacco products.

The information in the monograph will also document research and policy gaps and provide critical action steps with recommendations. This will help in curbing the burden of smokeless tobacco in India and aid policymakers to form evidence-backed policies.

## Other activities undertaken

#### Healthy India: Web Technology for Health Promotion and Prevention of Chronic Disease

#### Healthy India

(www.healthyindia.org.in) is an awardwinning website created, maintained, and managed by the Health Communication Division at PHFI, in collaboration with and financially supported by the Ministry of Health and Family Welfare.

Launched in April 2007, Healthy India aims at promoting health-seeking behavior and increasing health literacy through the provision of credible information. The initiative seeks to promote balanced diet, physical activity, lifestyle management, caring for the environment, and avoiding tobacco and alcohol related health problems. It provides information and expert opinion on stress management, blood pressure, diabetes, cancers, heart disease, and stroke and on factors that affect health such as climate change.

In March-April 2013, a two-week campaign, 'Fit Ho Jao!' was conducted

as part of the health education and awareness generation activities for Healthy India. Organized at Dilli Haat in New Delhi, the campaign provided an enabling platform for experts and approximately 3,000 visitors to engage in a dialogue aimed at changing mindsets and attitudes related to health issues. The underlying messages behind aesthetically-crafted posters revolved around the benefits of physical activity and healthy diet, and included simple exercise tips, prevalent medical myths, and short testimonials. A large number of visitors said that they were able to rediscover the joy of sweating and running out of breath, and the adrenalin rush of physical activity through specially designed challenges of skipping rope, push-ups, hoola hoops, physical activity, dumb charades, mirror image games, Surya Namaskar, and ball games during the event.

In addition, free diagnostic tests for blood pressure, ECG, and blood sugar were conducted using the Swasthya Slate. Informative messages on blood pressure, heart problems, and other ailments were also portrayed through posters and standees to enhance mass awareness.

On the concluding day, an interactive quiz competition on health was followed by a health message from PHFI President Professor K Srinath Reddy, on the exhilaration of physical activity and its role in the prevention of disease. The winners of the quiz competition were given prizes by the guest of honor, former Governor, Reserve Bank of India, Dr Y.V. Reddy. Two humorous, but hard-hitting short plays titled 'Lifestyle Monsters' and 'Chusti ka Formula,' followed, which garnered an enthusiastic response from the audience.

### Chronic Obstructive Pulmonary Disease (COPD) Genetics Consortium

The South Asia Network for Chronic Disease, a collaborative venture between the Public Health Foundation of India and the constituent colleges of the Wellcome Trust Bloomsbury Centre for Clinical Tropical Medicine, has initiated this project on the Genetics of Chronic Obstructive Pulmonary Disease (COPD) Consortium in India along with various clinicians and genetic epidemiologists to enroll the 3,000 cases and 3,000 controls for COPD. The purpose of this project is to evaluate the genetic and environmental determinants of COPD in North Indian populations through a multi-centre study. An additional component of this project is to identify major environmental determinants (apart from smoking) of this disease and evaluate gene-environment interactions. This project had been funded by the Government of India's Department of Biotechnology, Ministry of Science and Technology.

### South Asia Health and Wellness Tracking Program (SAHWP)

The South Asian population is experiencing the onset of cardiometabolic diseases at younger ages, lower body mass indices, and increasingly in lower socioeconomic groups. These diseases have increased the financial burden to individuals (direct loss) and society (indirect loss of human capital).

The South Asia Health and Wellness Tracking Program (SAHWP) is the largest community-based health tracking project in South Asia targeted at preventing chronic noncommunicable diseases, particularly diabetes and cardiovascular diseases. SAHWP will directly touch the lives of 28,000 people by annually tracking health and quality of life indicators in three of the world's largest cities--Delhi, Karachi, and Chennai--and promoting healthy lifestyle choices plus referring participants with newly identified risk factors or conditions to systems of care to maintain health or manage their illnesses. The program will also benefit community, industry, government, NGOs, and other policy leaders by providing an evidence-based understanding of NCD risks in these contexts. The data will be used to devise more effective and sustainable health promotion and disease prevention initiatives. Thus SAHWP will have short-term and long-term implications on health and lifestyle in a region of over 1.6 billion people.

# Other Projects

Project Title	Funding Body
Comparison of Fiscal and Regulatory Policies to Prevent Non-Communicable Diseases in India	IDRC
Development of Manual for Non- Communicable Diseases and Standard Treatment Guideline	Karnataka State Health System Resource Centre and Government Of Karnataka
Urban Health In the South Asia Region: Concepts and Data	The World Bank Group
A Health-Cost Study to Estimate the Economic Burden of Tobacco Related Disease at National And Sub-National Level in India And Blood Glucose	WHO
Prevalence of Rheumatic Heart Disease among School Children of 5-15 Years Age Group, Using Echocardiography with Doppler at Three Sites In India	Medtronic Foundation







The global HIV/AIDS epidemic is an unprecedented crisis that requires an unprecedented response.

Kofi Annan

# Infectious Diseases

# Towards better management of HIV and emerging infectious diseases

India's HIV program is at a critical juncture. The adult HIV prevalence at the national level has declined from 0.41 percent in 2001 to 0.27 percent in 2011. New HIV infections have declined by 57 percent, from 2.74 lakh in 2000 to 1.16 lakh in 2011. Despite these successes, challenges remain in the form of program scale up, rising HIV trends in the hitherto lowprevalence states, and gaps in the quality of services. The priority also shifts to the low prevalence states in Northern and Eastern India where the capacities for an effective response are limited. Service delivery from different stakeholders in isolation of each other leads to loss of follow-up actions. As the private sector accounts for 80 percent of health service offtake, the enhanced involvement of private players in both the HIV and non-HIV health sectors is a high priority area, as is augmenting social protection measures.

In order to monitor and curb the spread of infection, the National AIDS

Control Agency (NACO) and stakeholders came together to review the current situation and plan a future course of action. PHFI, as part of its mandate in the area of infectious diseases, has been closely involved with the third phase of the NACO program to prevent and control HIV/AIDS, which focuses on preventive efforts, while integrating them with accessible and affordable medical care.

Additionally, the HIV/AIDS Partnership: Impact through Prevention, Private Sector and Evidence-based Programing (PIPPSE) Project (2012-17), a PHFIimplemented and USAID-funded project, is a creative and timely response to support the national program. PIPPSE is supporting the national program in generating critical evidence, in terms of scale, comprehensiveness and generalizability for scientific scale up, through the National Integrated Behavioural and **Biological Surveillance (IBBS) among** the Most At Risk Population and migrants, the first study of its kind at

the global level. Apart from establishing evidence on migration and HIV dynamics through the IBBS, PIPPSE is implementing a Comprehensive District Network Model in Thane district of Maharashtra state to demonstrate a way of increasing service coverage and reducing dropouts, leading to a decrease in the number of new infections. PIPPSE is supporting NACO for instigating enhanced engagement of the private sector through policy advocacy and innovative models. This intervention is at a critical juncture, and the joint designing of activities by NACO and PIPPSE, will facilitate systematic scale up of successful pilots and institutional building for greater sustainability.

Several ongoing and completed projects at PHFI highlight our commitment to address various facets of the HIV infection. Assessment of HIV incidence and its determinants in a longitudinal cohort-based study, in a representative population in India, attempts to provide empirical data for

the first time on the incidence of HIV and its determinants at the population level. A baseline sero-prevalence of HIV, herpes simplex virus-2 (HSV-2), syphilis, and sexual and other risk behavior was conducted on a representative cohort of 12,600 adult men and women in rural and urban clusters of Guntur district in Andhra Pradesh in 2004-2005. A five-year follow up of this cohort is planned to estimate new HIV, HSV-2, and syphilis infections and ascertain the determinants of HIV incidence and the transmission dynamics at the individual, partnership, and broader levels. In addition, assessment of the bias in reporting sexual behavior using a confidential polling box approach would be conducted. Barriers to key HIV prevention, treatment, and care interventions would be assessed in order to further these interventions. The main outcome from this study would help in understanding HIV transmission and its control in high burden parts of India.

Along with studies on HIV incidence, PHFI is also conducting impact assessments of HIV prevention programs in Andhra Pradesh. The goal of the project is to assess HIV transmission dynamics and the collective impact of all HIV prevention programming in the state, and enhance analytical capacity for such analysis.

In addition to the above studies on HIV incidence and impact assessments of prevention programs, affordability of treatment options is also being evaluated. In a study on costeffectiveness of anti-retroviral treatment (ART) and its determinants. data on ART facilities in Andhra Pradesh and Rajasthan were conducted in order to understand and attempt a quantification of costs and constraints to ART service delivery within each state. The ultimate goal of this costing exercise would be to calculate the cost of delivering ARTspecific interventions in a variety of settings. Analysis of qualitative data would enable contextualizing the

quantitative findings. A variety of wellestablished econometric methods would be employed to explore the relationships between inputs, intermediate outputs, health outcomes, and total costs of ART services. It is expected that this empirical work would enable decision makers to use evidence to identify the costs and consequences of different policy options. This study would detail ART service provision bottlenecks and costeffective policy, and strategy options for improving ART service provision in India.

PHFI is also involved in enhancing the skill sets of professionals working in sexually transmitted diseases (STI) and HIV/AIDS in order to equip them to provide quality services to implement programs and to conduct research in STI and HIV/AIDS. This program is being conducted in collaboration with the University of Sydney.

# Other activities undertaken

## Bihar Evaluation of Social Franchising and Telemedicine (Best)

The Bihar Social Franchising and Telemedicine project is a social franchising model of health service delivery that links informal sector providers across the state and refers their patients to MBBS physicians using telemedicine technologies. Over the next four years, this project would establish a large-scale, sustainable health service delivery network consisting of 15,000 rural health providers, 12,000 rural and urban pharmacies, and 2,000 telemedicine/tele-diagnostic centers by engaging existing informal and formal private sector providers to improve detection, diagnosis, and treatment of four diseases prioritized by the Gates Foundation (TB, Kala Azar, childhood diarrhoea, and childhood pneumonia). PHFI is the technical partner with COHESIVE-INDIA (Collaboration for Health Systems Improvement and Impact Evaluation in India).

### Identifying sources, pathways, and risk drivers in an epidemic prone North Indian district

Japanese encephalitis (JE), a vectorborne disease that causes neurological infection in humans, is a developmental issue with multiple linkages to poverty, socioeconomic status, gender, environment, and urban-rural population distribution. Our study would focus on the microecosystems present in Kushinagar district of Uttar Pradesh to understand how various risk drivers come together to determine IE occurrence and transmission in human populations. The long-term objective of this research study would be to provide an in-depth evidence base for informing the design of effective, interventions to improve health and livelihoods by preventing and controlling JE in India and in the larger South Asian context, focusing on human-animal health interactions, social and environmental influences, and a micro-ecosystem perspective.



# Other Projects

#### Project Title

Hybridized Cell Phone and Survey Generated Communication Network

Building Inter-Sectoral Collaboration for Combating Zoonotic Infections in India

#### **Funding Body**

The University Of Chicago and National Institutes Of Health

WHO



"The test of our progress is ... whether we provide enough for those who have too little."

Franklin D. Roosevelt

# Women and Child Health

Pro-poor, pro-women research: Reaching those who need it the most

According to the World Health Organisation, "...global leaders increasingly recognize that the health of women and children is the key to progress on all development goals." These observations find resonance in PHFI's research, training and advocacy efforts, which are sharply focused on women and children – the most vulnerable group. PHFI is contributing to national efforts to uplift the lives of the poor, of women and children, through knowledge generation and advocacy. For PHFI's community of scholars the ultimate aim is to see this knowledge transformed into actions that will further shape a just and equitable society

One key target is reducing maternal and infant deaths. Identifying and understanding what works through meaningful evaluation and through the active engagement of community stakeholders is an important step towards this goal. Whatever is learnt from these interactions, observations and evaluations must be shared and adapted into effective and targeted policies. PHFI's projects in Uttar Pradesh and Gujarat involve such knowledge generation to provide evidence for effective decision-making in the linked areas of maternal and child health and the financing of this key sector. Health expenses remain a significant burden on the poor and providing safety nets or social health insurance can prevent vulnerable households from going deeper into debt.

Gujarat: 'The large-scale innovative propoor programs focused on reducing maternal mortality in India: a proposal for impact evaluation (MATIND)' - this study compares two models of maternal care financing in Gujarat. The overall goal of the study is to develop a methodology to compare and assess the impact of two large-scale programs for the financing of maternal healthcare in India: a targeted bursary approach to providing delivery services as in the Chiranjeevi Yojana versus the conditional cash transfer approach in the Janani Suraksha Yojana. This study will bring out lessons for other states and identify best practices to further

improve the scheme in Gujarat. This study has been funded by the European Union and coordinated by the Department of Public Health Sciences, Global Health at Karolinska Institute, Sweden.

Uttar Pradesh: Although 20 percent of India's children – that is one out of every 5 -- are born in Uttar Pradesh, the state also has very high neonatal (28 percent) and maternal (35 percent) mortality rates. Uttar Pradesh faces a whole array of infrastructural and social problems, with high rates of illiteracy and social inequities. PHFI's project, 'To change health behaviors and improve coverage of health services by activating social platforms for the poor in Uttar Pradesh.' aims to reduce deaths among women and their children by improving family health through behavioral changes and increasing the quality, access, and use of health services. The project will use the platform of women's self-help groups (SHG) to reach this goal.

# Other activities undertaken

## Reproductive health framework for improved family planning and reproductive health services

The project aims to reduce maternal mortality and morbidity through safe abortion and quality family planning services with private sector involvement and by using social franchisee platform services which will support national family planning services in India. The unmet need for family planning for both limiting and spacing methods is very high. The low contraceptive prevalence rate leads to many births, several unwanted pregnancies, and unsafe abortions, all of which contribute significantly to maternal mortality and morbidity. In spite of government efforts to provide free services on family planning, the acceptance rate is low. Many couples do not get the opportunity to choose the best family planning services from the wide range of products available in the market.

The project aims to develop 280 franchisee clinics in Bihar and Odisha to provide family planning services. PHFI's role is to build the capacity of the franchisee doctors (MBBS and above) by disseminating the latest knowledge on family planning, ensure quality assurance, facilitate accreditation of the clinics with the government, and develop technical documents (modules, facilitator guides) for capacity building activities. The Federation of Obstetric and Gynecological Societies of India (FOGSI) is the technical partner on the project.

The project has two phases. During the inception phase (January 2013-March 2013) the project team undertook a rapid assessment of the ground situation. The PHFI team visited the field and assessed the training needs, the quality of family planning services in the private sector, and the basket of services provided. It did a mapping of private providers and brought in professional organizations



like FOGSI and the Indian Medical Association. During the implementation phase (April-2013 onward), PHFI will finalize the technical documents, conduct a national expert meet, monitor orientation, and conduct a state master-trainers workshop in Odisha. By December 2013, PHFI will achieve capacity building of all the doctors in the 280 franchisee clinics.

### Assessment and evaluation of the Safe Childbirth Checklist (SCC) Phase II

Approximately 30 percent of all neonatal deaths globally occur in India. Rajasthan has particularly high neonatal mortality, with 43.9 neonatal deaths per 1,000 live births and 388 maternal deaths per 100,000 live births. Almost half of these occur in the first 48 hours after birth. With an increase in facility-based deliveries through programs such as Janani Suraksha Yojana, the number of such deliveries has increased phenomenally in a very short time, but the quality of care provided to the mother and neonate is far from acceptable. A simple checklist – with standard steps taken for a safe birth – is a tool to ensure that at least the simple procedures are followed. The goal of this evaluation is to measure the effectiveness and cost-effectiveness of the WHO safe childbirth checklist in reducing early neonatal mortality. The SCC is a paper-based tool designed to ensure that practitioners perform specific and essential practices at four key pause points: on admission; just before pushing (or Caesarean section); within one hour after birth; and prior to discharge. SCC improves the quality of care by helping skilled birth attendants adhere to procedures for safe childbirth and early neonatal care.

The evaluation results on mortality will be used at the state level by the Government of Rajasthan and the Technical Advisory Group to inform decisions on the scale-up and wider adoption of the checklist. At the national level, the evidence generated will be shared with the Government of India, national partners, and international organizations focusing on maternal and child health to guide policy decisions and advocacy on the SCC.

# Other Projects

Title	Funding Body
Community Intervention to Improve Growth among Children Under Two in Rural India	University College London and The Medical Research Council, UK
Four Training Workshop on Adverse Events Following Immunization Related Activities	WHO & DCGI
Technical Assistance and Supervision for Operationalization of Maternal Death Review in the State of Andhra Pradesh	UNICEF & PHFI
Bringing the Safe Child Protection Tools to Practice: Partnerships for Data Collection, Analysis and Implementation Research In India and Haiti	Oak Foundation and Harvard School of Public Health
Development and Piloting an Intervention Model To Delay First Pregnancy and Spacing of Second Child among Married Adolescents and Young People: Phase-2	WHO
Policy Window Preparation Grant	Global Development Network and International Initiative for Impact Evaluation Incorporated
Certificate Course on Comprehensive Contraceptive Measures	United Nations Population Fund
Status Of India's Newborn (SOIN) Report	Save The Children
Women's Reach Initiative - Phase I	Harvard School of Public Health
Data Informed Platform for Health	London School of Hygiene and Tropical Medicine
Short Documentary Film on Maternal Mortality: Policy Options, Opportunities and Challenges In Karnataka	Karnataka State Health System Resource Centre, Government of Karnataka
Post-Graduate Diploma in Management of Maternal and Child Health Management	UNICEF
Evidence-Based Service Delivery Through Health System Strengthening In Five Districts of Odisha - An External Monitoring Model.	UNICEF





"The doctor of the future will no longer treat the human frame with drugs, but rather will cure and prevent disease with nutrition."

Thomas Edison

# Public Health Nutrition

# Transforming the way the world thinks and acts on nutrition

Undernutrition in early life is responsible for the deaths of millions of young children annually. The associated human and economic costs are enormous, and yet the rate of undernutrition reduction remains glacial. While "what works" in terms of direct nutrition interventions is well known, scaling up is not happening fast enough or not at all. There are large resource flows in sectors such as agriculture, social protection, and health systems, but their potential to improve nutrition is rarely exploited. Finally, wider societal norms do not support nutrition as well as they could.

PHFI is committed to reducing nutrition related problems in India by being involved in nutrition research, advocacy, and policy development.

The Transform Nutrition research program consortium (TN), of which PHFI is a part, aims to transform thinking and action on nutrition. The objective of TN is to strengthen the content and use of nutrition-relevant evidence to accelerate undernutrition reduction through this decade in the two highest burden regions of South Asia and sub-Saharan Africa, with special focus on four high-burden countries: Kenya, India, Bangladesh, and Ethiopia.

TN focuses on the 1,000-day period from pre-pregnancy to 24 months of age - the window of opportunity when interventions are most effective at reducing undernutrition. TN's research is structured around three core pillars: scaling up direct nutrition interventions; leveraging indirect nutrition interventions; and an enabling environment for nutrition. These pillars are aligned with the three levels of the undernutrition problem the immediate, underlying, and basic causal levels. Embedded in these research pillars, and permeating the work of PHFI and its partners, are three cross-cutting themes: governance, inclusion, and fragility.

As TN's regional head of the Capacity Strengthening Working Group for South Asia, PHFI is actively involved in the development of short public health nutrition courses, leadership training, distance-learning initiatives, and detailed audits of nutrition-relevant capacity in India. In addition to capacity building initiatives, PHFI will contribute to TN's ongoing activities through the upcoming India Health Report on Nutrition that aims at evidence-based assessment of current achievements and challenges related to maternal and child nutrition in India. PHFI will collaborate with other TN partners for academic research on themes embedded in the three research pillars of TN.

PHFI is also committed to study, assess, and reduce severe acute malnutrition (SAM) among children. SAM is a major cause of morbidity and mortality in Madhya Pradesh, with estimates from the National Family Health Survey

(NFHS)-3 indicating that 12.6 percent of children below five years are suffering from SAM in the state. The Government of Madhya Pradesh has established Nutrition Rehabilitation Centres (NRCs) for inpatient management of children with severe acute malnutrition. In spite of a large investment and positioning of NRCs as a core strategy in addressing the severe malnutrition problem in the state, there has yet been no systematic study to understand how caregivers perceive the services provided at NRCs. Although there are anecdotal reports, there is very little information about the health, nutrition, and growth status of children after discharge and the status of NRC-promoted practices adopted by caregivers.

The PHFI study will fill this lacuna with a nutritional status assessment of children after their discharge from these NRCs. PHFI will conduct a crosssectional study of children who have



been discharged one year previously from NRCs; they will be visited in their home. Another assessment will be longitudinal, following a cohort of SAM children after they are admitted into an NRC.

This growth assessment of children after their discharge will fill a vital information gap about the progress of children in the community and the extent to which NRC-promoted child care and feeding practices are adopted by families. There will also be a methodical review of the operations of NRCs. As one of the first studies in the state to systematically review treatment centres, this initiative will help the state health department identify program and operational issues in the management of SAM children and suggest recommendations for improvement.

As part of its commitment to support policy research and development, PHFI is involved as a collaborator on the POSHAN (Partnerships and Opportunities to Strengthen and Harmonize Actions for Nutrition in India) initiative, along with the International Food Policy Research Institute (IFPRI) and the Institute of Development Studies (IDS), Sussex, with support from the Bill & Melinda Gates Foundation. POSHAN is a fouryear initiative which aims to build evidence on effective actions for nutrition and support the use of evidence in decision-making.

The overall goal of POSHAN is to improve and support policy and program decisions and actions to accelerate reductions in maternal and child undernutrition in India, through an inclusive process of evidence synthesis, knowledge generation, and knowledge mobilization. Its two major objectives are 1) To analyse direct and indirect nutrition-relevant interventions to generate knowledge on optimal approaches to address major bottlenecks to improving maternal and child nutrition outcomes in India: 2) To mobilize evidence-based and actionable knowledge to inform policy formulation and support program planning for nutrition at the national level and in three to four key states.

PHFI is currently engaged in activities focused on the second objective. Its aim is to develop, in year two to four of the initiative, a knowledge management strategy for POSHAN by viewing the nutrition policy landscape from the lens of evidence use and analyzing the stakeholder landscape through stakeholder research. POSHAN has completed a review of major health and nutrition policies that impact the first 1,000 days following birth. It provides a brief overview of undernutrition in India as a major public health problem; presents a snapshot of the various Five Year Plans (FYPs); and synthesizes direct and indirect nutrition interventions and strategies being introduced through the FYPs. After obtaining protocol clearance from the Institutional Ethics Committee of PHFI for Stakeholder Research, the team began a round of national level stakeholder interviews on policy process, the use of evidence in policy, and the need to identify patterns related to the use of information and knowledge. Nationallevel interviews were conducted along with partner organizations with a target audience of senior bureaucrats, civil society representatives, nutrition experts, lawyers, National Advisory Council representatives, media, and Supreme Court Commissioners. Data analysis and reporting of research results is underway.
The three partners of POSHAN are in the process of initiating state-level interviews and data analysis that will inform a knowledge mobilization strategy for the project, with the aim of strengthening partnerships and opportunities to tackle undernutrition in India.

Additionally, PHFI, in partnership with Oxfam India and IDS, Sussex, is conducting a study to develop a Hunger Reduction Commitment Index (HRCI) for India. HRCI is a tool developed by a consortium of organizations led by IDS to measure political commitment to address the problem of hunger and to alleviate the conditions that underpin it. HRCI measures the commitment of governments and other stakeholders credibly, and thus enables governments to track, refine, and prioritize their efforts. While all the other similar initiatives look at indicators related to outcomes retrospectively, HRCI prospectively focuses on indicators of political commitment.

The India HRCI is being developed as a composite of different indicators in three major areas of political commitment - legal framework,



policies and programs and budgetary expenditures — pertaining to different development sectors that directly or indirectly contribute to hunger and malnutrition. PHFI has modified the methods and indicators of the global index to meet the situations and priorities of India and its states. The index will be developed through a rigorous review of available data. An expert survey in select settings as well as a community voice study would inform this process. The India HRCI will be prepared for all those states where data on select indicators are readily available. PHFI's report will also include a narrative on barriers and enablers of hunger and malnutrition elimination in India and its states, in order to suggest a roadmap for improvement.

The following activities have been completed under the project: finalizing HRCI indicators for India as well as the states; finalizing the methods and processes for indicator operationalization; preparing the HRCI for the India national setting and 14 state settings of Assam, Bihar, Chhattisgarh, Jharkarand, Kerala, Madhya Pradesh, Odisha, Punjab, Rajasthan, Tamil Nadu, Uttarakhand, Uttar Pradesh, and West Bengal; conducting an Expert Survey and putting together the primary HRCI for Bihar, Odisha, and Uttar Pradesh; organizing community perception studies in Bihar, Odisha, and Uttar Pradesh and preparing the community voices report; drafting an Advocacy and Communication Strategy for India HRC; presentation of the HRCl to an expert panel; and preparing the HRCI report.

In order to identify the current strengths and gaps in the area of nutrition-relevant capacity in India, PHFI is performing an assessment of the curriculum and capacity of institutions that offer academic programs in nutrition in India, followed by in-depth case studies of centres of excellence in research and academia. PHFI is also conducting focus group discussions with young professionals and scholars as well as key informant interviews with leaders in the field of public health nutrition to identify the future roadmap of public health nutrition education and formulate an international standard curriculum in public health nutrition.

This year, PHFI proposes to launch the India Health Report on Nutrition. This biennial report, aimed at a broad national and international policy and academic audience, will provide a periodic assessment of health in India, with each issue focusing on a specific area of health challenge. The inaugural issue will provide a rigorous analytical overview of the current trends, challenges, and puzzles related to maternal and child nutrition in India, and highlight the role of policy in improving a wide range of nutritional outcomes, especially at the state level. PHFI is also working with the International Food Policy Research Institute on a cross-country analysis of the impact of women's empowerment on child health outcomes.

# Other activities undertaken

# Effect of heating on the trans fatty acid content of commonly consumed Indian edible oils and fried snacks in South Delhi

Trans fats have been shown to contribute to adverse cardiovascular outcomes. A common source of trans fats in the Indian diet is from foods prepared in partially hydrogenated vegetable oils. A knowledge of the levels of trans fats in the snacks and consumption patterns of oil in households will help in raising consumer awareness. This project is concerned with analyzing trans fats in deep fried, ready-to-eat snacks (and the oils they are fried in) commonly sold in the market. The project will also survey oil consumption and usage patterns amongst a subset of households in south Delhi. In January 2013 this project was transferred to the All India Institute of Medical Sciences, New Delhi. During the duration of the project at the Indian Institute of Public Health-Delhi household surveys were conducted in 200 households of south Delhi; vendor surveys were done amongst 50 small-sized vendors in south Delhi markets; and a sampling of freshly prepared deep-fried snacks being sold was done in the same vendors' outlets.



### Second International Seminar on Nutritional Epidemiology

The Second International Seminar on Nutritional Epidemiology, held in November 2012 at New Delhi, was jointly organized by the Centre for Chronic Disease Control (CCDC) and Public Health Foundation of India. supported by Center of Excellence -Center for Cardio-metabolic Risk Reduction in South Asia (COE CARRS), Indian Council of Medical Research. and Transform Nutrition. The seminar focused on three themes: epidemiological methods, examining diet and disease relationships, and nutritional assessment. The seminar had the following objectives: to address the lack of comprehensive and nationwide education and training for specialists with a primary focus on public health nutrition; to organize capacity building programs conforming to common standards of education, training and quality assurance, to assist implementation of effective public health nutrition policies and programs. The seminar was attended by 37 participants representing UN agencies, research organizations, universities, medical institutes, pharmaceutical companies, and government and nongovernment organizations. The key speakers were 15 national and

international faculty and representatives from Emory University (USA), Imperial College (London), Centre for Chronic Disease Control, Public Health Foundation of India, Delhi University, Food Safety and Standards Authority of India, South Asia Network for Chronic Disease, Indian Council of Medical Research, St. John's Medical College, International Food Policy Research Institute, and All India Institute of Medical Sciences.

# Other Projects

Project Title	Funding Body
Endline Evaluation of the Wheat Flour Fortification Project	World Food Programme
Evaluation of Integrated Child Development Services (ICDS) in Gujarat	Global Alliance for Improved Nutrition







Science can amuse and fascinate us all, but it is engineering that changes the world.

ISAAC ASIMOV

# Affordable Health Technology

# Innovative technologies towards improving public health

Access to quality, affordable healthcare in the developing world remains a challenge. The problem of providing the services is further complicated by lack of doctors and trained practitioners in many rural and urban areas. A key intervention to address this issue lies in employing frontline health workers for delivery of care. Frontline health workers allow delivery of care and diagnostics in remote areas at affordable rates. They need, however, to be supported by use of technologies that can enable them to deliver diagnostics, provide care for patients, generate referrals, deliver health communication and ensure that every patient has access to his or her records. In this context, PHFI's Affordable Health Technologies division has designed Swasthya Slate, a system that allows an Android tablet/phone to deliver 33 medical diagnostics using a single kit. It has been validated in field tests in Punjab and Andhra Pradesh and is currently being used internationally in Peru and Timor Leste.

The overall framework of the Swasthya Slate operations involves diagnostic devices interfaced to a Bluetooth unit. An affordable diagnostic device has been taken and readings have been digitized. These digitized values are sent to an Android tablet, wirelessly. In the tablet, a free-to-use application called Swasthya Slate allows the healthcare worker to take demographic details as well as the clinical information of the patient. The worker can then use the diagnostic equipment to take the patient's vitals which are stored in the memory of the tablet. These are uploaded to a central server when the internet connection is available, allowing for remote monitoring and telemedicine applications. The operation is simple and hence this device can be used by all. The average learning time of the tool is five minutes and 30 seconds.

The device was tested in rural Odisha and Himachal Pradesh and will soon be tested in Jammu and Kashmir. The test results show a 99.94 percent similarity to conventional expensive detection devices. The success rate in uploading test reports was 99.2 percent in test areas as remote as 7200 feet in the upper Himalayas.

The importance of the device lies in it being a portable diagnostic lab which can run 33 diagnostic tests and screen for diabetes, hypertension (one of the risk factors for CVD), and preeclampsia. The results are instant and the cost of conducting these tests is one-tenth of the current market price. In addition, it creates and maintains a database for screened populations, which could be analyzed by the healthcare workforce anytime and anywhere in the world for the purpose of epidemiology research. The test includes detection of blood pressure, sugar levels in the blood, heart rate, urine profile, foetal Doppler, onsite typhoid IgG/IgM, malaria, HIV-1 and HIV-2, hepatitis B virus, syphilis, to name a few.

In addition to its importance as a detection tool, Swasthya Slate records

information regarding the location of patients and healthcare facilities through its GPS system. It can store information regarding patients that helps in longitudinal monitoring by healthcare providers. Accredited Social Health Activist care givers also contact doctors through the kit's telemedicine application. The various applications that are integrated within the tool have been developed by internationally renowned clinicians. For example, the cardiovascular screening application was developed by leading Indian cardiologist Dr. Srinath Reddy. The oral cancer screening application utilizes the in-built camera to take and transmit pictures of lesions to doctors who could be far away from patient locations. Applications for nutrition monitoring, immunizations of neonates, health communication, and advocacy also make this tool multipurpose.

Its affordability, ease of use, ability to evolve and be integrated with various applications, easy connectivity with the internet and the community make the Swasthya Slate an important biomedical tool kit for India.





"Health leaps out of science and draws nourishment from the society around it"

Gunnar Myrdal

# Social Determinants of Health

Shaping a conducive social environment towards better health

The World Health Organisation's Commission on Social Determinants of Health defines the Social Determinants of Health (SDH) as "the conditions in which people are born, grow, live, work and age, including the health system."

Health is not merely a medical or health systems issue. It is the consequence of multiple complex interactions within the human body as well as the social, economic, physical environment in which a person lives. Moreover, in India huge differences exist among and between classes, gender, caste, and regions in both disease burden and the health system's response. Hence simultaneous action on the social determinants like water and sanitation, nutrition security, environment, income security with social inclusion, and equity across gender, caste and religious categories is necessary along with health system strengthening so as to achieve

sustainable changes in the public health scenario and move towards universal health coverage.

As a response to these needs, PHFI has set up the **South Asia Centre for Disability Inclusive Development & Research** (SACDIR) and the

Ramalingaswami Centre for Social Determinants of Health (RC-SDH) with the objective of targeting action on multiple, intersecting, and overlapping social determinants of health. The RC-SDH has been established with funding from the V. Ramalingaswami Foundation, while SACDIR has been established in technical collaboration and support from the London School of Hygiene and Tropical Medicine, and its component institution, the International Centre for Evidence in Disability.

Given below are brief comments on some PHFI-supported projects aimed at improving the social determinants of health. Guiding Pro-Poor Investments in the Nexus Among Domestic Water Quality and Quantity, Sanitation and Hygiene and Agriculture from the Bottom-Up (WATSAN-AGRICULTURE NEXUS)

Funded by The Center For Development Research (ZEF), The Rheinische Friedrich-Wilhelms-Universität Bonn (University Of Bonn) and the Bill & Melinda Gates Foundation, this project started in April 2013, it takes an interdisciplinary and systems approach to identify tradeoffs, synergies and thresholds, i.e., the nexus, among water quality and quantity, sanitation and hygiene and agriculture and their implication for investment priorities - made specific in community business plans - for a better health and nutrition outcome.

The project is to be carried out at sites in Ethiopia, Ghana, India, and Bangladesh with strong local partners who have considerable experience in field-based research.



Intermediate outcomes expected are improved access to drinking water (in quality and quantity), better hygiene practices, improved sanitation services and strengthened capacities for AG-WATSAN management at domestic and community levels – all in relation to actual investment costs and institutional actions The overall outcome measures expected are improved health and nutrition status of the population at study locations.

### Addressing gender Responsive Primary Health Care In India

Gender — the socially constructed traits, behaviors, and roles for women and men — is an important, yet widely overlooked consideration in the design and delivery of healthcare services. This study aims to explore how health policies and programs can respond to gender considerations with the goal of enhancing utilization of primary health services by women and men.

The key principle underlying this project is that adverse health outcomes arising from differences in service delivery to and service use by men and women is an inequality stemming from decisions made by health policymakers and directly relate to the planning and organization of health services. In this sense perhaps, gender inequalities are no different from inequalities associated with economic status or ethnic origin (and indeed gender inequalities interact with such other inequalities). This study, funded by the Royal Norwegian Embassy, New Delhi, intends to inform and stimulate such actions and interventions.

# Gender, Policy and Measurement (GPM): Gender and Reproductive, Maternal, Newborn and Child Health and Adolescent Health (RMNCH + A) Outcomes Systemic Review

PHFI, in collaboration with the Gender, Policy, and Measurement program (implemented by MEASURE Evaluation and the Health Policy Project), is conducting a systematic review of the evidence on how gender programing influences RMNCH+A, gender-based violence, tuberculosis, HIV, and universal health coverage outcomes.

This study is funded by MEASURE Evaluation, University of North Carolina at Chapel Hill, and USAID and began in July 2013. The review includes a global overview of the evidence as well as a focus on evidence from programs in India specifically. it has two components:

- a review of published literature on evaluations of relevant interventions;
- key informant interviews with incountry implementers to gather information on the lessons learned during implementation of gender-integrated programming.

The results of the review will be shared in early to mid-2014 through a series of dissemination workshops to inform development of future genderintegrated programs in India.

Workshop of India's National Network on Social Determinants of Health on Health Equity Surveillance, Support Follow-Up to Universal Health Coverage High Level Expert Group (UHC-HLEG) Recommendation

Universal Health Coverage reforms, and the degree to which they progress equitably, require the development and implementation of a comprehensive health equity watch. The Public Health Foundation of India, under the direction of its President, Prof. K. Srinath Reddy, former UHC HLEG chairperson, is now advancing plans for developing this framework and piloting and operationalizing it at subnational levels.

In light of WHO's significant expertise in health equity surveillance globally as well as its role as Secretariat for the Commission on Social Determinants of Health, a two-day consultative workshop was organized in June 2013, jointly by PHFI and WHO. The workshop brought together key stakeholders from government, civil society, and the research community to deliberate and chart steps towards the institutionalisation of an Indian model for health equity surveillance or a Health Equity Watch (HEW). The workshop involved a series of productive discussions with enthusiastic participation by a range of stakeholders from three countries and eight Indian states. They included:

- Central Bureau of Health Intelligence (CBHI),
- Delhi's Ministry of Women and Child Development,
- National Health Systems Resource Centre,





- Civil society and grassroots organisations including the People's Health Movement/ Jan Swasthya Abhiyan (JSA), the Society for Nutrition Education and Health (SNEHA), the Self Employed Women's Association (SEWA), the Child in Need Institute (CINI),
- Academic institutions including the International Institute of Population Sciences (IIPS), Institute of Public Health (IPH), and Azim Premji University (APU),
- Senior technical resource persons from Brazil and WHO headquarters.

PHFI research scholars produced a background paper.

## Climate Change and Heat Health Research

Given the predictions of increased temperatures, rising sea levels, and changing disease patterns, there is a need for increased scientific research and study of adaptation to climate change with a particular focus on public health, especially for the most vulnerable populations. Preparing for, and responding to health emergencies caused by changing climate will be critical to saving lives and protecting developing economies.

In March 2011, the Public Health Foundation of India and the Natural Resources Defense Council conducted a workshop on Climate Change: Heat and Health, Assessing Vulnerability in Gujarat, which was sponsored by the U.S.-Indo Science and Technology Forum. It brought together leaders in the field to discuss strategies for developing and implementing vulnerability assessments and related preparedness plans. The research was presented at the Indian Institute of Science in Bangalore at the third national conference of India Climate Change research network and also in the climate change network meeting in Delhi. Interns and dissertation students from the Emory University and the CEPT University also participated.

# Climate Change: Addressing Heat-Health Vulnerability In Rapidly Urbanizing Regions Of Western India

Based on a previously conducted research, four issue briefs in the Rising Temperatures, Deadly Threat series provide specific recommendations for how key stakeholders and the most vulnerable residents — government officials, healthcare professionals, outdoor workers, and slum communities — can reduce vulnerability to extreme heat events in Ahmedabad.

The project team held high-level and one-on-one meetings in March with the Ahmedabad Mayor, Ahmedabad Municipal Corporation (AMC) Nodal Officer and key AMC officials (including health officers), in preparation for the formal launch of the Heat Action Plan. A blog by NRDC's Kim Knowlton outlines the pre-launch activities in Ahmedabad in March 2013. In April 2013, the

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Ahmedabad Municipal government piloted the ground-breaking 'Ahmedabad Heat Action Plan 2013: A Guide to Extreme Heat Planning in Ahmedabad, India.' This event was widely reported in the print and electronic media.

Scientific manuscripts on the research conducted are in various stages of completion. The first work titled 'A Cross-Sectional, Randomized Cluster Sample Survey of Household Vulnerability to Extreme Heat among Slum Dwellers in Ahmedabad, India' has just been published in the International Journal of Environmental Research and Public Health.

## **Global Road Safety Program**

The Bloomberg Philanthropies Global Road Safety Program (formerly known as the Road Safety in ten countries - RS 10) is being implemented by a consortium of six international partners to improve road safety in ten countries, including India. It is funded by Johns Hopkins Bloomberg School of Public Health, Johns Hopkins University. The focus of the RS 10 interventions are on two risk factors — reduction of drunk driving and increase in helmet usage. The program was started in August 2012 includes activities such as

- conducting observational studies of drunk driving and helmet use;
- conducting roadside surveys of knowledge, attitudes, and practices (KAP) related to drunk driving and helmet use;
- establishing hospital-based surveillance in at least one (up to four) hospital to gather road traffic injury data.

Participants in the study include drivers and passengers along selected roadways, police, health professionals, community leaders, members of the general public and victims of road traffic crashes at the emergency departments of hospitals.

Synthesis of Evidence on the Social Determinants of Health to Inform

#### **Research and Policy in India**

Despite growing recognition that action on social determinants of health is crucial for improving population health, no systematic compilation of the levels and trends of social determinants of health in India exists to guide policymaking.

Started at PHFI in 2010 and supported by a grant from the UK-based BUPA Foundation, this effort aims to integrate diverse evidence to identify the best ways to use the available evidence on social determinants of health and identify the major gaps to inform further development of research and policy to effectively reduce health inequities in India.

National and sub-national analyses were undertaken to understand the trends of social determinants including education, environment, housing conditions, poverty, water and sanitation, nutrition, social protection, and governance over the past two decades. This analytical assessment of the data available for measuring the major social determinants of health in India included exploring inequities by state, gender, caste, and urbanization; and discussing the role of national government initiatives in addressing these areas. This analysis is being written up for publication.

#### Multi-centric Collaborative Study on the impact of Global Warming, Environmental CEanges and Ultra Violet Radiation (UVR) exposure on Ocular Health in India

The project will undertake a case study of the Northeast region and the coastal region in South India in comparison to Delhi and the National Capital Region (NCR) for the impact of increased UVR on prevalence of cataract, dry eye, and pterygium in people above 40 years and allergic disorders in children between 5 and 15 years.

It is funded by the Indian Council of Medical Research and was initiated in 2010. The relevant data on ozone and UVR will be collected through satellite measurements at Guwahati and coastal South India and the medical data will be collected through Risk Assessment Surveys by teams from Dr. R. P. Centre (North India), Regional Institute of Ophthalmology in Guwahati (North East), and the Centre for Disability, PHFI, Hyderabad (coastal South India).

# ATTEND Trial: Family-led rehabilitation after stroke in India

Strokes are the sixth overall leading cause of the global disease burden. The annual rate of new cases of stroke in India is 135 to 145 per 100,000 population, with early case fatality rates ranging from 27 percent to 41 percent. This equates to 1.5 million people having a stroke each year, and a further 500,000 people, each year, living with stroke disability.

The most important treatment for stroke is well coordinated and organized acute care. Although inpatient care and rehabilitation may meet important clinical, physical, and psycho-social needs during the early crisis phase, the needs of patients and family in the long-term are not easily addressed in hospital.

# Other Projects

Project Title	Funding Body
Building the Research Capacity of ightsavers Regional and Area Office	Sightsavers (Royal Commonwealth
unctionaries	Society for The Blind)

The development of an effective lowcost community rehabilitation service for an emerging major chronic disease, such as stroke, in India has the potential to make an important public health impact. This project aims to determine, with a multicentre, randomised, blinded outcome assessor, controlled trial, whether a family-led caregiver-delivered home-based rehabilitation intervention versus usual care is an effective, affordable Early Supported Discharge strategy for those with disabling stroke in India. It started in January 2013 and is funded by the National Health and Medical Council, Australia.

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"I do the very best I know how, the very best I can, and I mean to keep on doing so until the end."

Abraham Lincoln

# Publications

# Articles in Journals

# Jan – Aug 2013

- Abbas, SS, Kakkar, M. Systems thinking needed for rabies control. *Lancet.* 2013; 381:200.
- Abbas, SS, Kakkar, M. Research and policy disconnect yet again: The case of rabies research in India. *Indian J Med Res.* 2013: [In Press].
- Addo, OY, Stein, AD, Fall, CH, Gigante, DP, Guntupalli, AM, Horta, BL, Kuzawa, CW, Lee, N, Norris, SA, Prabhakaran, P, Richter, LM, Sachdev, HS, Martorell, R, Consortium on Health Orientated Research in Transitional Societies (COHORTS) Group. Maternal Height and Child Growth Patterns. J Pediatr. 2013: [Epub ahead of print].
- Agrawal, P. Agrawal, S. Vitamin A supplementation among children in India: Does their socioeconomic status and the economic and social development status of their state of residence make a difference? Int J Med Public Health. 2013; 3:48-54.
- Agrawal, P, Gupta, K, Mishra, V, Agrawal,
   S. A study on body-weight perception, future intention and weight-management behaviour among normal-weight, overweight and obese women in India. *Public Health Nutr.* 2013:[Epub ahead of print].
- Agrawal, P, Gupta, K, Mishra, V, Agrawal,
   S. Effects of sedentary lifestyle and dietary

habits on body mass index change among adult women in India: Findings from a follow up study. *Ecol Food Nutr.* 2013: [In Press].

- Agrawal, P, Gupta, K, Mishra, V, Agrawal, S. Causes, consequences and preventive measures of obesity: Awareness among normal weight, overweight and obese women in India. *Int J Med Public Health.* 2013: [In Press].
- Agrawal, S. Association between legume intake and self-reported diabetes among adult men and women in India *BMC Public Health.* 2013: [In Press].
- Agrawal, S, Karan, A, Selvaraj, S, Bhan, N, Subramanian, SV, Millett, C. Socio-economic patterning of tobacco use in Indian states. *Int J Tuberc Lung Dis.* 2013; 17:1110-7.
- Agrawal, S, Pearce, N, Ebrahim, S. Prevalence and risk factors for self-reported asthma in an adult Indian population: a cross-sectional survey. *Int J Tuberc Lung Dis.* 2013; 17:275-82.
- Agrawal, S, Unisa, S. Pregnancies, abortion and women's health in rural Haryana, India. *J Community Med Health Educ.* 2013; 3:207-12.
- 12. **Agrawal, S,** Unisa, S, Agrawal, P. Women's childhood experience: a perspective from

rural Haryana, India. *J Hum Behav Soc Environ.* 2013; 23:437-61.

- Agrawal, S, Unisa, S, Agrawal, P. Pregnancies, abortion and women's reproductive health in rural Haryana, India. *Journal of Nursing Science & Practice*. 2013; 3:29-38.
- Arora, M, Mathur, MR, Singh, N. A framework to prevent and control tobacco among adolescents and children: introducing the IMPACT model. *Indian J Pediatr.* 2013; 80 Suppl 1:S55-62.
- Arora, M, Nazar, GP. Prohibiting tobacco advertising, promotions and sponsorships: Tobacco control best buy. *Indian J Med Res.* 2013; 137:867-70.
- Aubinière-Robb, L, Jeemon, P, Hastie, CE, Patel, RK, McCallum, L, Morrison, D, Walters, M, Dawson, J, Sloan, W, Muir, S, Dominiczak, AF, McInnes, GT, Padmanabhan, S. Blood pressure response to patterns of weather fluctuations and effect on mortality. *Hypertension.* 2013; 62:190-6.
- Babu, G, R., Srikanthi, BN, Jotheeswaran, AT. Epidemiological correlates of breast cancer in South India. *Asian Pac J Cancer Prev.* 2013: [In Press].

- Babu, GR, Mahapatra, T, Mahapatra, S, Kumar, S, Hussain, MA. Epidemiology methods for practice by obstetricians in developing countries - I. Internet Scientific Publication. 2013; 11.
- Baig, MB, Panda, B, Chauhan, AS, Das, JK. Is public private partnership an effective alternative to government in the provision of primary healthcare? A case study in Odisha. J Health Manag. 2013: [In Press].
- Bailey, PK, Tomson, CR, Kinra, S, Ebrahim, S, Radhakrishna, KV, Kuper, H, Nitsch, D, Ben-Shlomo, Y. Differences in estimation of creatinine generation between renal function estimating equations in an Indian population: cross-sectional data from the Hyderabad arm of the Indian migration study. *BMC Nephrol.* 2013; 14:30.
- 21. **Balasubramaniam, P,** Marten, R. From ripple to tsunami? Universal Health Coverage (UHC) in India and beyond: regional and global implications of India's move towards UHC. *Journal of Contemporary Politics.* 2013: **[In Press].**
- 22. Basu, S, Glantz, S, Bitton, A, **Millett, C.** The effect of tobacco control measures during a period of rising cardiovascular disease risk in India: A mathematical model of myocardial infarction and stroke. *PLoS Med.* 2013; 10:e1001480.
- 23. Bedford, J, Mackey, S, Parvin, A, Muhit, M, Murthy, GVS. Reasons for non-uptake of

referral: children with disabilities identified through the Key Informant Method in Bangladesh. **Disabil Rehabil.** 2013: [Epub ahead of print].

- Bele, SD, Bodhare, TN, Valsangkar, S, Saraf, A. An epidemiological study of emotional and behavioral disorders among children in an urban slum. Psychol Health Med. 2013; 18:223-32.
- Bourne, R, Price, H, Taylor, H, Leasher, J, Keeffe, J, Glanville, J, Sieving, PC, Khairallah, M, Wong, TY, Zheng, Y, Mathew, A, Katiyar, S, Mascarenhas, M, Stevens, GA, Resnikoff, S, Gichuhi, S, Naidoo, K, Wallace, D, Kymes, S, Peters, C, Pesudovs, K, Braithwaite, T, Limburg, H, Disease Vision Loss Expert Group, **Dandona, R, Dandona, L,** for Global Burden of Disease Vision Loss Expert Group. New systematic review methodology for visual impairment and blindness for the 2010 Global Burden of Disease study. **Ophthalmic Epidemiol.** 2013; 20:33-9.
- Brahmapurkar, KP, Lanjewar, AG, Zodpey, SP, Brahmapurkar, VKS, Khan, QH, Khakse, GM, Sinha, T, Giri, VC, Shrivastava, PK, Chauhan, VKS. Morbidities in the glass factory workers of Central India. *International Organization of Scientific Research Journal of Dental and Medical Sciences.* 2013; 7:29-33.
- 27. Braykov, NP, Eber, MR, Klein, EY, Morgan, DJ, **Laxminarayan, R.** Trends in resistance to carbapenems and third-generation

cephalosporins among clinical osolates of Klebsiella pneumoniae in the United States, 1999-2010. *Infect Control Hosp Epidemiol.* 2013; 34:259-68.

- Chakravarty, N, Harmer, A. Social determinants affecting the implementation of ICDS programme in Maharastra, India. *International Journal of Sociology and Social Policy.* 2013:[Epub ahead of print].
- Chakravarty, N, Pati, S. Do inequalities in child health get wider as countries develop? *Int J Child Health Hum Dev.* 2013; 6.
- Chatterjee, S, Laxminarayan, R. Costs of surgical procedures in Indian hospitals. BMJ Open. 2013; 3.
- Chatterjee, S, Levin, C, Laxminarayan, R. Unit cost of medical services at different hospitals in India. *PLoS One* 2013: [In Press].
- Chiyaka, C, Tatem, AJ, Cohen, JM, Gething, PW, Johnston, G, Gosling, R, Laxminarayan, R, Hay, SI, Smith, DL. Infectious disease. The stability of malaria elimination. *Science*. 2013; 339:909-10.
- Clark, AD, Griffiths, UK, Abbas, SS, Rao, KD, Privor-Dumm, L, Hajjeh, R, Johnson, H, Sanderson, C, Santosham, M. Impact and cost-effectiveness of Haemophilus influenzae type B conjugate vaccination in India. J Pediatr. 2013; 163:S60-72.

- Dale, CE, Bowling, A, Adamson, J, Kuper, H, 41. Amuzu, A, Ebrahim, S, Casas, JP, Nuesch, E. Predictors of patterns of change in healthrelated quality of life in older women over 7 years: evidence from a prospective cohort study. *Age Ageing.* 2013; 42:312-8.
- Dandona, L, Kumar, GA, Lakshmi, V, Ahmed, GMM, Akbar, M, Ramgopal, SP, Sudha, T, Alary, M, Dandona, R. HIV incidence from the first population-based cohort study in India. *BMC Infect Dis.* 2013; 13:327.
- Das, A, Babu, GR, Ghosh, P, Mahapatra, T, Malmgren, R, Detels, R. Epidemiologic correlates of willingness to be tested for HIV and prior testing among married men in India. *Int J STD AIDS*. 2013:[Epub ahead of print].
- Davey Smith, G, Egger, M, Ebrahim, S. Re: "need for more individual-level metaanalyses in social epidemiology: example of job strain and coronary heart disease". *Am J Epidemiol.* 2013; 178:153-4.
- Dawson, J, Jeemon, P, Hetherington, L, Judd, C, Hastie, C, Schulz, C, Sloan, W, Muir, S, Jardine, A, McInnes, G, Morrison, D, Dominiczak, AF, Padmanabhan, S, Walters, M. Serum uric acid level, longitudinal blood pressure, renal function, and long-term mortality in treated hypertensive patients. *Hypertension.* 2013; 62:105-11.
- Devasenapathy, N, Neogi, SB, Zodpey, SP. Is intravenous iron sucrose the treatment of choice for pregnant anemic women? J Obstet Gynaecol Res. 2013; 39:619-26.
- 40. Dohare, S, Garg, VK, **Sarkar, BK.** A study of hospital waste management status in health facilities of an urban area. *Int J Pharm Bio Sci.* 2013; 4:1107-12.

- Dudala, SR, Gopi Krishna, B, Rao, AR, Reddy, BC, **Patki, SM, Patki, MB.** Utilisation pattern of aarogyasri health insurance scheme by cancer patients in Khammam district, Andhra Pradesh. *Int J Bio Med Res.* 2013; 4:3041-5.
- 42. **Ebrahim, S.** Improving causal inference. *Int J Epidemiol.* 2013; 42:363-6.
- 43. **Ebrahim, S,** Pearce, N, Smeeth, L, Casas, JP, Jaffar, S, Piot, P. Tackling non-communicable diseases in low- and middle-income countries: is the evidence from high-income countries all we need? **PLoS Med.** 2013; 10:e1001377.
- Edeghere, O, Shankar, G, Bartholomew, A, Ramachandra, S, Singh, V, Banandur, P, Parr, L, Yap, K, Olowokure, B, Ibbotson, S. International collaboration for improved public health emergency preparedness and response in India. Online Journal of Public Health Informatics. 2013; 5:e152.
- 45. Elliott, HR, Walia, GK, Duggirala, A, Groom, A, Reddy, SU, Chandak, GR, Gupta, V, Laakso, M, Dekker, JM, The Risc Consortium, Walker, M, Ebrahim, S, Smith, GD, Relton, CL. Migration and DNA methylation: a comparison of methylation patterns in type 2 diabetes susceptibility genes between Indians and Europeans. Journal of Diabetes Research and Clinical Metabolism. 2013; 2.
  - Ezekowitz, JA, Bakal, JA, Westerhout,
    CM, Giugliano, RP, White, H, Keltai, M,
    Prabhakaran, D, Tricoci, P, Van de Werf,
    F, Califf, RM, Newby, LK, Armstrong, PW.
    The relationship between meteorological conditions and index acute coronary events in a global clinical trial. *Int J Cardiol.* 2013:[Epub ahead of print].

- Finzer, LE, Ajay, VS, Ali, MK, Shivashankar, R, Goenka, S, Sharma, P, Pillai, DS, Khandelwal, S, Tandon, N, Reddy, KS, Narayan, KM, Prabhakaran, D. Fruit and vegetable purchasing patterns and preferences in South Delhi. *Ecol Food Nutr.* 2013; 52:1-20.
- Fortes, C, Mastroeni, S, Sperati, A, Pacifici, R, Zuccaro, P, Francesco, F, Agabiti, N, Piras, G, Amleto, D, Ebrahim, S. Walking four times weekly for at least 15min is associated with longevity in a Cohort of very elderly people. *Maturitas.* 2013; 74:246-51.
- Gandra, S, Braykov, N, Laxminarayan, R. East North Central region has the highest prevalence of vancomycin-resistant enterococcus faecalis in the United States. *Infect Control Hosp Epidemiol*. 2013; 34:443-5.

 Garg, P, Kaur, S, Gupta, D, Osmond, C, Lakshmy, R, Sinha, S, Kapil, U, Sachdev, HP. Variability of thinness and its relation to cardio-metabolic risk factors using four body mass index references in schoolchildren from Delhi, India. *Indian Pediatr.* 2013:[Epub ahead of print].

- Ghosh, A, Wright, FA, Zou, F. Unified analysis of secondary traits in case-control association studies. *Journal of the American Statistical Association.* 2013; 108:566-76.
- 52. Giraldez, RR, Clare, RM, Lopes, RD, Dalby, AJ, Prabhakaran, D, Brogan, GX, Jr., Giugliano, RP, James, SK, Tanguay, JF, Pollack, CV, Jr., Harrington, RA, Braunwald, E, Newby, LK. Prevalence and clinical outcomes of undiagnosed diabetes mellitus and prediabetes among patients with high-risk non-ST-segment elevation acute coronary syndrome. *Am Heart J.* 2013; 165:918-25 e2.

129

and the film of the set of the se

46.

- Gupta, I, Guin, P, Trivedi, M. The new patent regime and disease priorities in India. *Glob Public Health.* 2013; 8:37-54.
- 54. Gupta, V, Vinay, DG, Sovio, U, Rafiq, S, Kranthi Kumar, MV, Janipalli, CS, Evans, D, Mani, KR, Sandeep, MN, Taylor, A, Kinra, S, Sullivan, R, Bowen, L, Timpson, N, Smith, GD, Dudbridge, F, Prabhakaran, D, Ben-Shlomo, Y, Reddy, KS, Ebrahim, S, Chandak, GR. Association Study of 25 Type 2 Diabetes Related Loci with Measures of Obesity in Indian Sib Pairs. *PLoS One.* 2013; 8:e53944.
- Hogerzeil, HV, Jonathan, L, Wirtz, VJ, Kishore, SP, Selvaraj, S, Kiddell-Monroe, R, Mwangi-Powell, FN, Schoen-Angerer, TV, The Lancet NCD Action Group. Promotion of access to essential medicines for non-communicable diseases: practical implications of the UN political declaration. *Lancet.* 2013; 381:680-9.
  - Huan, X, Tang, W, Babu, GR, Li, J, Zhang, M, Liua, X, Yan, H, Fu, G, Zhao, J, Yang, H, Detels, R. HIV risk-reduction counseling and testing on behavior change of MSM. *PLoS One*. 2013; 8:e69740.
- 57. Huffman, MD, Prabhakaran, D, Abraham, AK, Krishnan, MN, Nambiar, AC, Mohanan, PP, on behalf of the Kerala Acute Coronary Syndrome Registry, I. Optimal in-hospital and discharge medical therapy in acute coronary syndromes in Kerala: Results from the Kerala Acute Coronary Syndrome Registry. *Circ Cardiovasc Qual Outcomes.* 2013: [Epub ahead of print].
- Jackson, S, Mathews, KH, Pulanic, D, Falconer, R, Rudan, I, Campbell, H, Nair, H. Risk factors for severe acute lower respiratory infections in children: a systematic review and meta-analysis. Croat Med J. 2013;

#### 54:110-21.

- Jalili, M, Pati, S, Rath, B, Bjørklund, G, Singh, RB. Effect of diet and nutrients on molecular mechanism of gene expression mediated by nuclear receptor and epigenetic modulation. *The Open Nutraceuticals Journal.* 2013; 6:27-34.
- 60. Jeemon, P, Prabhakaran, D. Does uric acid qualify as an independent risk factor for cardiovascular mortality? *Clin Sci (Lond)*. 2013; 124:255-7.
- Jefferis, BJ, Whincup, PH, Welsh, P, Wannamethee, SG, Rumley, A, Ebrahim, S, Lawlor, DA, Lowe, GD. Prospective study of IL-18 and risk of MI and stroke in men and women aged 60-79 years: A nested casecontrol study. *Cytokine*. 2013; 61:513-20.
- 62. Jena, PK, Kishore, J, Jahnavi, G. Correlates of digit bias in self-reporting of cigarette smoked per day (CPD) frequency: results from Global Adult Tobacco Survey (GATS), India and its implications. *Asian Pac J Cancer Prev.* 2013; 14:3866-9.
- 63. Jena, PK, Kishore, J, Sarkar, BK. Global Adult Tobacco Survey (GATS): A case for change in definition, analysis and interpretation of "cigarettes" and "cigarettes per day" in completed and future GATS surveys. Asian Pac J Cancer Prev. 2013; 14:3299-304.
- Jimenez Soto, E, La Vincente, S, Clark, A, Firth, S, Morgan, A, Dettrick, Z, Dayal, P, Aldaba, BM, Kosen, S, Kraft, AD, Panicker, R, Prasai, Y, Trisnantoro, L, Varghese, B, Widiati, Y, Investment Case Team for India Indonesia Nepal Papua New Guinea the Philippines. Investment case for improving maternal and child health: results from four countries. BMC Public Health. 2013; 13:601.

 Josyula, L, Lyle, R. Health care provider physical activity prescription intervention. *Am J Health Education.* 2013; 44:162-8.

66.

- Josyula, L, Lyle, R. Cross cultural comparison of attitudes towards aging and physical activity. *World Cultures eJournal* 2013: [In Press].
- Josyula, LK, Lyle, RM. Barriers in the implementation of a physical activity intervention in primary care settings: lessons learned. *Health Promot Pract.* 2013; 14:81-7.
- Kakkar, M, Rogawski, ET, Abbas, SS, Chaturvedi, S, Tapan, D, Hossain, SS, Krishnan, SK. Quality of surveillance data for acute encephalitis syndrome and Japanese encephalitis in Kushinagar district, Uttar Pradesh, 2011-2012. Emerging infectious diseases. 2013: [In Press].
- 69. Karthikeyan, G, Sengottuvan, NB, Joseph, J, Devasenapathy, N, Bahl, VK, Airan, B. Urgent surgery compared with fibrinolytic therapy for the treatment of left-sided prosthetic heart valve thrombosis: a systematic review and meta-analysis of observational studies. *Eur Heart J.* 2013:[Epub ahead of print].
- Khan, TA, Shah, T, Prieto, D, Zhang, W, Price, J, Fowkes, GR, Cooper, J, Talmud, PJ, Humphries, SE, Sundstrom, J, Hubacek, JA, Ebrahim, S, Lawlor, DA, Ben-Shlomo, Y, Abdollahi, MR, Slooter, AJ, Szolnoki, Z, Sandhu, M, Wareham, N, Frikke-Schmidt, R, Tybjaerg-Hansen, A, Fillenbaum, G, Heijmans, BT, Katsuya, T, Gromadzka, G, Singleton, A, Ferrucci, L, Hardy, J, Worrall, B, Rich, SS, Matarin, M, Whittaker, J, Gaunt, TR, Whincup, P, Morris, R, Deanfield, J, Donald, A, Davey Smith, G, Kivimaki, M, Kumari, M, Smeeth, L, Khaw, KT, Nalls, M, Meschia, J, Sun, K, Hui, R, Day, I, Hingorani,

AD, Casas, JP. Apolipoprotein E genotype, cardiovascular biomarkers and risk of stroke: systematic review and meta-analysis of 14,015 stroke cases and pooled analysis of primary biomarker data from up to 60,883 individuals. *Int J Epidemiol.* 2013; 42:475-92.

- 71. Khandelwal, S, Kelly, L, Richa, M, Prabhakaran, D, Reddy, KS. Impact of omega-6 fatty acids on cardiovascular outcomes: A review. J Prevetive Cardiology. 2013; 2:325-36.
- Khandelwal, S, Shidhaye, R, Demonty, I, Lakshmy, R, Gupta, R, Prabhakaran, D, Reddy, KS. Impact of omega-3 fatty acids and/or plant sterol supplementation on non-HDL cholesterol levels of dyslipidemic Indian adults. *Journal of Functional Foods.* 2013; 5:36-43.
- Khandelwal, S, Siegel, KR, Narayan, KMV. Nutrition research in India: Underweight, stunted, or wasted? *Global Heart.* 2013; 8:131-7.
- Kinra, S, Radha Krishna, KV, Kuper, H, Sarma, KVR, Prabhakaran, P, Gupta, V, Walia, GK, Bhogadi, S, Kulkarni, B, Kumar, A, Aggarwal, A, Gupta, R, Prabhakaran, D, Reddy, KS, Smith, GD, Ben-Shlomo, Y, Ebrahim, S. Cohort Profile: Andhra Pradesh Children and Parents Study (APCAPS). Int J Epidemiol. 2013: [In Press].
- Kishore, J, Jena, PK, Bandyopadhyay, C, Swain, M, Das, S, Banerjee, I. Hardcore smoking in three South-East Asian countries: Results from the global adult tobacco survey. Asian Pac J Cancer Prev. 2013; 14:625-30.
- Kishore, SP, Basu, S, Selvaraj, S. Access to cancer medicines in India. *Lancet Oncol.* 2013; 14:e136.

- Klein, EY, Laxminarayan, R. The potential impact of age and season on methicillinresistant Staphylococcus aureus prevalence. *Future Microbiol.* 2013; 8:809-12.
- Klein, EY, Sun, L, Smith, DL,
   Laxminarayan, R. The changing epidemiology of methicillin-resistant staphylococcus aureus in the United States: a national observational study. *Am J Epidemiol.* 2013: [Epub ahead of print].
- 79. Kumar, B, Sharma, K, Zodpey, S. The nomenclature and classification of human resources for health: A review. *J Health Manag.* 2013; 15:203-26.
- Lakshmi, JK. Feeding the problem, seeking a solution: India's nutrition and health paradox. J Health Manag. 2013: [In Press].
- Lamy, A, Devereaux, PJ, Prabhakaran, D, Taggart, DP, Hu, S, Paolasso, E, Straka, Z, Piegas, LS, Akar, AR, Jain, AR, Noiseux, N, Padmanabhan, C, Bahamondes, JC, Novick, RJ, Vaijyanath, P, Reddy, KS, Tao, L, Olavegogeascoechea, PA, Airan, B, Sulling, TA, Whitlock, RP, Ou, Y, Pogue, J, Chrolavicius, S, Yusuf, S, Coronary Investigators. Effects of off-pump and onpump coronary-artery bypass grafting at 1 year. N Engl J Med. 2013; 368:1179-88.
- Lee, JT, Agrawal, S, Basu, S, Glantz, SA, Millett, C. Association between smokefree workplace and second-hand smoke exposure at home in India. *Tob Control.* 2013:[Epub ahead of print].
- Luksic, I, Clay, S, Falconer, R, Pulanic, D, Rudan, I, Campbell, H, Nair, H. Effectiveness of seasonal influenza vaccines in children - a systematic review and meta-analysis. *Croat Med J.* 2013; 54:135-45.

- Luksic, I, Kearns, PK, Scott, F, Rudan, I, Campbell, H, Nair, H. Viral etiology of hospitalized acute lower respiratory infections in children under 5 years of age -a systematic review and meta-analysis. Croat Med J. 2013; 54:122-34.
- Lyngdoh, T, Viswanathan, B, Kobrosly, R, van Wijngaarden, E, Huber, B, Davidson, PW, Cory-Slechta, DA, Strain, S, Myers, GJ, Bovet, P. Blood pressure and cognitive function: a prospective analysis among adolescents in Seychelles. J Hypertens. 2013; 31:1175-82.
- Mackay, J, Ritthiphakdee, B, Reddy, KS. Tobacco control in Asia. *Lancet.* 2013; 381:1581-7.
- Makela, SM, Dandona, R, Dilip, TR, Dandona, L. Social sector expenditure and child mortality in India: a state-level analysis from 1997 to 2009. *PLoS One.* 2013; 8:e56285.
- Makela, SM, Dandona, R, Dilip, TR, Dandona, L. Erratum: Social sector expenditure and child mortality in India: a state-level analysis from 1997 to 2009. PLoS One. 2013; 8.
- Malik, A, Taneja, DK, Devasenapathy, N, Rajeshwari, K. Short-course prophylactic zinc supplementation for diarrhea morbidity in infants of 6 to 11 months. *Pediatrics*. 2013:[Epub ahead of print].
- Mathur, C, Stigler, MH, Erickson, DJ, Perry, CL, Finnegan, JR, Jr., Arora, M, Reddy, KS. Change in tobacco use over time in urban Indian youth: the moderating role of socioeconomic status. *Health Educ Behav*. 2013:[Epub ahead of print].

- Millett, C, Agrawal, S, Sullivan, R, Vaz, M, Kurpad, A, Bharathi, AV, Prabhakaran, D, Reddy, KS, Kinra, S, Smith, GD, Ebrahim, S, for the Indian Migration Study Group. Associations between active travel to work and overweight, hypertension, and diabetes in India: A cross-sectional study. *PLoS Med.* 2013; 10:e1001459:1-12.
- Mohan, S, Campbell, N, Chockalingam, A. Time to effectively address hypertension in India. *Indian J Med Res.* 2013; 137:627-31.
- Mohan, S, Mini, GK, Thankappan, KR. High knowledge of Framework Convention on Tobacco Control provisions among local government representatives does not translate into effective implementation: findings from Kerala, India. *Public Health.* 2013; 127:178-81.
- 94. **Mohan, S, Prabhakaran, D,** Krishnan, A. Promoting population-wide salt reduction in South East Asia Region: current status and future directions. *WHO South-East Asia Journal of Public Health.* 2013; 17:72-9.
- 95. Mohanta, BC, Panda, B, Chauhan, AS, Pati, S, Nallala, S. Eye healthcare seeking behavior of rural elderly in Mayurbhanj district of Odisha – An exploratory study. Indian Journal of Public Health Research & Development. 2013:[In Press].
- Murali Prasad, MR, Kumar, VB. Web resources for neurologists and neurosurgeons. *Annals of Neurosciences*. 2013; 20:18-23.
- 97. Nair, H, Simoes, EA, Rudan, I, Gessner, BD, Azziz-Baumgartner, E, Zhang, JS, Feikin, DR, Mackenzie, GA, Moiisi, JC, Roca, A, Baggett, HC, Zaman, SM, Singleton, RJ, Lucero, MG, Chandran, A, Gentile, A, Cohen, C, Krishnan, A, Bhutta, ZA, Arguedas, A, Clara,

AW, Andrade, AL, Ope, M, Ruvinsky, RO, Hortal, M, McCracken, JP, Madhi, SA, Bruce, N, Qazi, SA, Morris, SS, El Arifeen, S, Weber, MW, Scott, JA, Brooks, WA, Breiman, RF, Campbell, H, for the Severe Acute Lower Respiratory Infections Working Group. Global and regional burden of hospital admissions for severe acute lower respiratory infections in young children in 2010: a systematic analysis. *Lancet.* 2013; 381:1380-91.

- Nair, R. Predictors of health behaviours among people with recently diagnosed Type 2 diabetes. *Int J Med Sci Public Health*. 2013; 2:364-75.
- Nair, R. Psychosocial covariates of physical activity in recently diagnosed Type 2 diabetes patients. *Global Journal of Medicine and Public Health.* 2013; 2:1-13.
- 100. Nakkeeran, N, Sharma, K, Zodpey, SP. Teaching social and behavioural sciences in medical and public health in India. South East Asia journal of Medical Education. 2013:[In Press].
- 101. **Nambiar, D.** Ethnography and HPSR: Critical reflections on fieldwork and policymaking in India. **Indian Anthropologist.** 2013:**[In Press].**
- 102. Nambiar, D. India's "Tryst" with universal health coverage: Observations of ethnography in Indian health policymaking. Soc Sci Med. 2013:[In Press].
- 103. Nandi, A, Ashok, A, Laxminarayan, R. The socioeconomic and institutional determinants of participation in India's Health Insurance Scheme for the poor. *PLoS One.* 2013; 8:e66296.

- 104. Nandi, A, Megiddo, I, Prabhakaran, D, Laxminarayan, R. An agent-based simulation modelling approach to extended costeffectiveness analysis of health interventions. Lancet. 2013; 381:S96.
- Nazar, GP, Gupta, VK, Millett, C, Arora, M. Tobacco imagery in Bollywood films: 2006–2008. *Heart Asia*. 2013; 5:44-6.
- Neogi, SB, Singh, R, Malhotra, S, Zodpey, SP, Chauhan, M. Courses in reproductive and child health in India: An overview. *Indian J Public Health.* 2013; 57:15-9.
- Newson, RS, Lion, R, Crawford, RJ, Curtis, V, Elmadfa, I, Feunekes, GI, Hicks, C, van Liere, M, Lowe, CF, Meijer, GW, Pradeep, B, **Reddy, KS,** Sidibe, M, Uauy, R. Behaviour change for better health: nutrition, hygiene and sustainability. *BMC Public Health*. 2013; 13:S1.
- Ng, M, Shanker-Raman, P, Mehta, R, Costa, AD, Mavalankar, DV. Initial results on the impact of Chiranjeevi Yojana: a public? Private partnership programme for maternal health in Gujarat, India. *Lancet.* 2013; 381:S98.
- Pagidipati, NJ, Huffman, MD, Jeemon, P, Gupta, R, Negi, P, Jaison, TM, Sharma, S, Sinha, N, Mohanan, P, Muralidhara, BG, Bijulal, S, Sivasankaran, S, Puri, VK, Jose, J, Reddy, KS, Prabhakaran, D. Association between gender, process of care measures, and outcomes in ACS in India: results from the detection and management of Coronary Heart Disease (DEMAT) Registry. *PLoS One.* 2013; 8:e62061.
- Painschab, MS, Davila-Roman, VG, Gilman, RH, Vasquez-Villar, AD, Pollard, SL, Wise, RA, Miranda, JJ, Checkley, W, Collaborators: Ebrahim, S, For Cronicas Cohort Study

Group. Chronic exposure to biomass fuel is associated with increased carotid artery intima-media thickness and a higher prevalence of atherosclerotic plaque. *Heart.* 2013; 99:984-91.

- 111. Panda, R, Jena, PK. Examining physicians' preparedness for tobacco cessation services in India: Findings from primary care public health facilities in two Indian states. *Australas Med J.* 2013; 6:115-21.
- 112. **Panda, R, Persai, D, Arora, M.** Leveraging tobacco control research in India: the need for setting up a tobacco control research network. *Addiction.* 2013:[Epub ahead of print].
- 113. **Patel, V,** Belkin, GS, Chockalingam, A, Cooper, J, Saxena, S, Unützer, J. Grand challenges: integrating mental health services into priority health care platforms. *PLoS Med.* 2013; 10:e1001448.
- 114. Prem Kumar, SG, Kumar, GA, Poluru, R, Schneider, JA, Dandona, L, Vemu, L, Sudha, T, Mayer, KH, Dandona, R. Contact with HIV prevention programmes & willingness for new interventions among truckers in India. Indian J Med Res. 2013; 137:1061-71.
- 115. Prusty, SK, Panda, B, Chauhan, AS, Das, JK. Factors affecting coverage of immunization services in urban slums of Odisha. *Healthcare in Low-resource Settings.* 2013:[In Press].
- 116. Puri, M, Kaur, L, **Walia, GK,** Mukhopadhhyay, R, Sachdeva, MP, Trivedi, SS, Ghosh, PK, Saraswathy, KN. MTHFR C677T polymorphism, folate, vitamin B12 and homocysteine in recurrent pregnancy losses: a case control study among north Indian women. *J Perinat Med.* 2013:[Epub ahead of print]

- 117. Raban, MZ, Dandona, R, Dandona, L. Variations in catastrophic health expenditure estimates from household surveys in India *Bull World Health Organ.* 2013: [Epub ahead of print].
- 118. Raj, SS, Maine, D, Sahoo, PK, Manthri, S, Chauhan, K. Meeting the community halfway to reduce maternal deaths? Evidence from a community-based maternal death review in Uttar Pradesh, India. *Glob Health Sci Pract.* 2013; 1:84-96.
- 119. Raman, PS, Mavalankar, DV, Iyer, V, Sydney, K, Mehta, R, Vora, K. Impact of a public?private performance-based financing partnership on the proportion of caesarean section deliveries: a cross-sectional study. *Lancet.* 2013; 381:S121.
- 120. **Rao, KD, Ramani, S, Hazarika, I, George, MS.** When do vertical programmes strengthen health systems? A comparative assessment of disease-specific interventions in India. Health Policy Plan. 2013; 28:[Epub ahead of print].
- 121. Rao, KD, Sundararaman, T, Bhatnagar, A, Gupta, G, Kokho, P, Jain, K. Which doctor for primary health care? Quality of care and non-physician clinicians in India. Soc Sci Med. 2013; 84:30-4.
- 122. **Reddy, KS.** Evidence-based interventions in low- and middle income countries: the tigress awakens. *J Adolesc Health.* 2013; 52:S5-S6.
- Reddy, KS, Roy, A. Cardiovascular risk of NSAIDs: Time to translate knowledge into practice. *PLoS Med.* 2013; 10:e1001389.
- 124. Roe, MT, Goodman, SG, Ohman, EM, Stevens, SR, Hochman, JS, Gottlieb, S, Martinez, F, Dalby, AJ, Boden, WE, White,

HD, **Prabhakaran, D,** Winters, KJ, Aylward, PE, Bassand, JP, McGuire, DK, Ardissino, D, Fox, KA, Armstrong, PW. Elderly patients with acute coronary syndromes managed without revascularization insights into the safety of long-term dual antiplatelet therapy with reduced-dose prasugrel vs. standarddose clopidogrel. *Circulation.* 2013:[Epub ahead of print].

- 125. Sadhu, G, Chaudhary, M, Chakravarty, N. Health Risk Assessment of Domestic Roof Water Harvesting Using Failure Mode and Effects Analysis: Evidence from Nagaur, Rajasthan, India. *Human and Ecological Risk Assessment: An International Journal.* 2013: [Epub ahead of print].
- 126. Safraj, S, Ajay, VS, Prabhakaran, D. Heart failure: meeting the challenges of surveillance and knowledge translation in resource-poor settings. *Curr Cardiol Rev.* 2013; 9:99-101.
- 127. Saha, S, Annear, PL, Pathak, S. The effect of self-help groups on access to maternal health services: evidence from rural India. Int J Equity Health. 2013; 12:36.
- 128. Salam, A, Stewart, F, Singh, K, Thom, S, Williams, HJ, Patel, A, Jan, S, Laba, T, Prabhakaran, D, Maulik, P, Day, S, Ward, H. INterpreting the processes of the UMPIRE Trial (INPUT): protocol for a qualitative process evaluation study of a fixed-dose combination (FDC) strategy to improve adherence to cardiovascular medications. BMJ Open. 2013; 3:1-4.
- Sanneving, L, Trygg, N, Saxena, DB, Mavalankar, DV, Thomsen, S. Inequity in India: the case of maternal and reproductive health. *Glob Health Action.* 2013; 6:1-31.

#### see as an as a second

- 130. **Sarkar, BK.** Re: The effect of perceived risks on the demand for vaccination: results from a discrete choice experiment. *PLoS One.* 2013; 8:e54149.
- 131. Sarkar, BK. Re: Can India pull off its ambitious National Health Mission? Lack of a public health cadre and an accountability framework in government health services and non existence of a potent regulatory authority for the private sector involvement will impede implementation and thwart the objectives of National Health Mission. BMJ. 2013; 346:f2134/rr/640613.
- 132. **Sarkar, BK.** Re: World could be declared free of polio by 2018. *BMJ.* 2013; 346:f2373/rr/644604.
- 133. Sarkar, BK. Re: Why is India short of nurses and what can we do about it? India needs to develop and implement a nurse centric but physician guided health care delivery model of "nurse practitioners" to ensure both quality and quantity of health professionals. BMJ. 2013; 346:f4024/rr/651481.
- 134. Sarkar, BK, Arora, M, Gupta, VK, Reddy, KS. Determinants of tobacco cessation behaviour among smokers and smokeless tobacco users in the states of Gujarat and Andhra Pradesh, India. Asian Pac J Cancer Prev. 2013; 14:1931-5.
- 135. **Sarkar, BK,** Dohare, S. Re: Rx: A dose of ethics to revive trust in medical practice. Not just a dose of ethics but a slow infusion right from medical school and creation of appropriate "role models" and "model institutions". *BMJ.* 2013; 346:f2987/rr/645222
- Satija, A, Agrawal, S, Bowen, L, Khandpur, N, Kinra, S, Prabhakaran, D, Reddy, KS, Smith, GD, Ebrahim, S. Association between

milk and milk product consumption and anthropometric measures in adult men and women in India: A cross-sectional study. *PLoS One.* 2013; 8:e60739.

- 137. Saxena, D, Nakkeeran, S, Vangani, R, Mavalankar, DV. Trends in institutional deliveries among disadvantaged groups and the impact of intervention in Gujarat: evidence from secondary data analysis. *Lancet.* 2013; 381:S129.
- 138. Saxena, DB, Vangani, R, Mavalankar, DV, Thomsen, S. Inequity in maternal health care service utilization in Gujarat: analyses of district-level health survey data. *Glob Health Action.* 2013; 6:1-9.
- 139. Selvaraj, S, Karan, A. Publicly-financed health insurance schemes: a response *Econ Polit Wkly*. 2013; 48:125-6.
- Shah, S, Casas, JP, Gaunt, TR, Cooper, J, Drenos, F, Zabaneh, D, Swerdlow, DI, Shah, T, Sofat, R, Palmen, J, Kumari, M, Kivimaki, M, Ebrahim, S, Smith, GD, Lawlor, DA, Talmud, PJ, Whittaker, J, Day, IN, Hingorani, AD, Humphries, SE. Influence of common genetic variation on blood lipid levels, cardiovascular risk, and coronary events in two British prospective cohort studies. *Eur Heart J.* 2013; 34:972-81.
- 141. Shah, SP, Nair, R, Shah, PP, Modi, DK, Desai, SA, Desai, L. Improving quality of life with new menstrual hygiene practices among adolescent tribal girls in rural Gujarat, India. *Reprod Health Matters.* 2013; 21:205-13.
- 142. Shahab, L, **Sarkar, BK**, West, R. The acute effects of yogic breathing exercises on craving and withdrawal symptoms in abstaining smokers. *Psychopharmacology* (*Berl*). 2013; 225:875-82.

- 143. Sharma, A, Pati, S, Chakravarty, N, Chauhan, AS. Physicians' nutritional counselling practices- a study in district hospitals of Chhattisgarh. Int J Med Public Health. 2013:[Epub ahead of print].
- 144. Sharma, B, Johansson, E, Prakasamma, M, Mavalankar, DV, Christensson, K. Midwifery scope of practice among staff nurses: A grounded theory study in Gujarat, India. *Midwifery*. 2013; 29:628-36.
- 145. Sharma, K, Zodpey, SP, Gaidhane, A, Syed, ZQ, Kumar, R, Morgan, A. Designing the framework for competency-based master of public health programs in India. J Public Health Manag Pract. 2013; 19:30-9.
- 146. Sharma, K, Zodpey, SP, Quazi, SZ, Gaidhane, A, Sawleshwarkar, S, Khaparde, S. Mapping and opportunities of human resource capacity building initiatives for HIV/ AIDS in India. *Ann Trop Med Public Health.* 2013; 6:30-41.
- 147. Sharma, K, Zodpey, SP, Syed, QZ, Gaidhane, A. Career opportunities for master of public health graduates in India. *Asia Pac J Health Management.* 2013; 8:45-50.
- 148. Sheeladevi, S, Mekala, J, Pujari, S, Rani, PK. Impact of a district-wide diabetes prevention programme involving health education for children and the community. *Health Education Journal.* 2013:[Epub ahead of print].
- 149. **Shidhaye, R,** Kermode, M. Stigma and discrimination as a barrier to mental health service utilization in India. *Int Health.* 2013; 5:6-8.
- 150. **Shidhaye, R,** Mendenhall, E, Sumathipala, K, Sumathipala, A, Patel, V. Association of somatoform disorders with anxiety and

depression in women in low and middle income countries: A systematic review. *Int Rev Psychiatry.* 2013; 25:65-76.

- 151. Shinde, S, Andrew, G, Bangash, O, Cohen, A, Kirkwood, B, **Patel**, V. The impact of a lay counselor led collaborative care intervention for common mental disorders in public and private primary care: A qualitative evaluation nested in the MANAS trial in Goa, India. *Soc Sci Med.* 2013; 88:48-55.
- 152. Shroff, ZC, Murthy, S, Rao, KD. Attracting doctors to rural areas: a case study of the post-graduate seat reservation scheme in Andhra Pradesh. *Indian J Community Med.* 2013; 38:27-32.
- 153. Shroufi, A, Chowdhury, R, Anchala, R, Stevens, S, Blanco, P, Han, T, Niessen, L, Franco, O. Cost effective interventions for the prevention of cardiovascular disease in low and middle income countries: a systematic review. *BMC Public Health.* 2013; 13:285.
- 154. Singh, A, Rouxel, P, Watt, RG, Tsakos, G. Social inequalities in clustering of oral health related behaviors in a national sample of British adults. *Prev Med.* 2013: [Epub ahead of print].
- 155. Singh, PV, Tatambhotla, A, Kalvakuntla, R, Chokshi, M. Understanding public drug procurement in India: a comparative qualitative study of five Indian states. BMJ Open. 2013; 3:e001987.
- 156. Smith, DL, Cohen, JM, Chiyaka, C, Johnston, G, Gething, PW, Gosling, R, Buckee, CO, Laxminarayan, R, Hay, SI, Tatem, AJ. A sticky situation: the unexpected stability of malaria elimination. *Philos Trans R Soc Lond B Biol Sci.* 2013; 368:20120145.

- 157. Srivastava, S, Malhotra, S, Harries, A, Lal, P, Arora, M. Correlates of tobacco quit attempts and cessation in the adult population of India: secondary analysis of the Global Adult Tobacco Survey, 2009--10. BMC Public Health. 2013; 13:263.
- 158. Stephen, MM, Jayanthi, JL, Unni, NG, Kolady, PE, Beena, VT, Jeemon, P, Subhash, N. Diagnostic accuracy of diffuse reflectance imaging for early detection of pre-malignant and malignant changes in the oral cavity: a feasibility study. *BMC Cancer.* 2013; 13:278.
- 159. Tabassum, R, Chauhan, G, Dwivedi, OP, Mahajan, A, Jaiswal, A, Kaur, I, Bandesh, K, Singh, T, Mathai, BJ, Pandey, Y, Chidambaram, M, Sharma, A, Chavali, S, Sengupta, S, Ramakrishnan, L, Venkatesh, P, Aggarwal, SK, Ghosh, S, **Prabhakaran, D, Reddy, KS,** Saxena, M, Banerjee, M, Mathur, S, Bhansali, A, Shah, VN, Madhu, SV, Marwaha, RK, Basu, A, Scaria, V, McCarthy, MI, Venkatesan, R, Mohan, V, Tandon, N, Bharadwaj, D. Genome-wide association study for type 2 diabetes in Indians identifies a new susceptibility locus at 2q21. *Diabetes.* 2013; 62:977-86.
- Taylor, A, Dangour, AD, Reddy, KS. Only collective action will end undernutrition. *Lancet.* 2013: [Epub ahead of print].
- Taylor, F, Huffman, MD, Macedo, AF, Moore, TH, Burke, M, Davey Smith, G, Ward, K, Ebrahim, S. Statins for the primary prevention of cardiovascular disease. *Cochrane Database Syst Rev.* 2013; 1:CD004816.
- Thomsen, S, Biao, X, Kusnanto, H, Mavalankar, DV, Malqvist, M, Ng, N, Diwan, V. The world we want: focus on the most disadvantaged. *Glob Health Action*. 2013; 6:1-3.

- 163. Thomsen, S, Ng, N, Biao, X, Bondjers, G, Kusnanto, H, Liem, NT, Mavalankar, DV, Malqvist, M, Diwan, V. Bringing evidence to policy to achieve health-related MDGs for all: justification and design of the EPI-4 project in China, India, Indonesia, and Vietnam. Glob Health Action. 2013; 6:1-10.
- 164. Tran, KV, Azhar, GS, Nair, R, Knowlton, K, Jaiswal, A, Sheffield, P, Mavalankar, DV, Hess, J. A cross-sectional, randomized cluster sample survey of household vulnerability to extreme heat among slum dwellers in ahmedabad, india. *Int J Environ Res Public Health.* 2013; 10:2515-43.
- Vellakkal, S. Determinants of enrolment in voluntary health insurance: evidences from a mixed method study, Kerala, India. *International Journal of Financial Research*. 2013; 4:99-107.
- 166. Vellakkal, S. Impact of private health insurance on lengths of hospitalization and healthcare expenditure in India: evidences from a quasi-experiment study. *Indian Journal of Economics and Development*. 2013; 1:24-8.
- Vellakkal, S, Ebrahim, S. Publicly-financed health insurance schemes. *Econ Polit Wkly.* 2013; 48:24-7.
- 168. Vellakkal, S, Subramanian, SV, Millett, C, Basu, S, Stuckler, D, Ebrahim, S. Socioeconomic inequalities in noncommunicable diseases prevalence in India: Disparities between self-reported diagnoses and standardized measures. *PLoS One.* 2013; 8:e68219.
- Vimaleswaran, KS, Berry, DJ, Lu, C, Tikkanen, E, Pilz, S, Hiraki, LT, Cooper, JD, Dastani, Z, Li, R, Houston, DK, Wood, AR, Michaelsson, K, Vandenput, L, Zgaga,

L, Yerges-Armstrong, LM, McCarthy, MI, Dupuis, J, Kaakinen, M, Kleber, ME, Jameson, K, Arden, N, Raitakari, O, Viikari, J, Lohman, KK, Ferrucci, L, Melhus, H, Ingelsson, E, Byberg, L, Lind, L, Lorentzon, M, Salomaa, V, Campbell, H, Dunlop, M, Mitchell, BD, Herzig, KH, Pouta, A, Hartikainen, AL, Streeten, EA, Theodoratou, E, Jula, A, Wareham, NJ, Ohlsson, C,

# Aug – Dec 2012

- Acharya, A, Vellakkal, S, Taylor, F, Masset, E, Satija, A, Burke, M, Ebrahim, S. The impact of health insurance schemes for the informal sector in low- and middle-income countries: a systematic review. *The World Bank Research Observer.* 2012: [Epub ahead of print].
- Agrawal, P, Agrawal, S. Obesity and reproductive health among Indian women. *Journal of Society and Communication.* 2012; 1:38-68.
- Agrawal, P, Agrawal, S. Emerging obesity threats among women in India: findings from a population based survey. *Int J Trop Med.* 2012; 7:177-86.
- Agrawal, P, Agrawal, S, Unisa, S. Spatial, socio-economic and demographic variation of childlessness in India: A special reference to reproductive health and marital breakdown. *Global Journal of Medicine* and Public Health. 2012; 1:1-15.
- Agrawal, PK, Agrawal, S, Mullany, LC, Darmstadt, GL, Kumar, V, Kiran, U, Ahuja, RC, Srivastava, VK, Santosham, M, Black, RE, Baqui, AH. Clean cord care practices and neonatal mortality: evidence from rural Uttar

Frayling, TM, Kritchevsky, SB, Spector, TD, Richards, JB, Lehtimaki, T, Ouwehand, WH, Kraft, P, Cooper, C, Marz, W, Power, C, Loos, RJ, Wang, TJ, Jarvelin, MR, Whittaker, JC, Hingorani, AD, Hypponen, E, Collaborators: **Ebrahim, S,** For Genetic Investigation of Anthropometric Traits Giant Consortium. Causal relationship between obesity and vitamin D status: bi-directional Mendelian randomization analysis of multiple cohorts. *PLoS Med.* 2013; 10:e1001383.

 Walker, CL, Rudan, I, Liu, L, Nair, H, Theodoratou, E, Bhutta, ZA, O'Brien, KL, Campbell, H, Black, RE. Global burden of childhood pneumonia and diarrhoea. *Lancet.* 2013; 381:1405-16.

Pradesh, India. *J Epidemiol Community Health.* 2012:[Epub ahead of print].

- Agrawal, S, Agrawal, P. Adolescent risktaking behaviour in India: The influence of socio-economic characteristics and living arrangement. *Journal of Community Nutrition & Health.* 2012; 1:26-31.
- Agrawal, S, Unisa, S, Agrawal, P. Psychological problems after abortion: Findings from rural Haryana, *India. Journal of Family Welfare*. 2012; 58:1-8.
- Ajay, VS, Praveen, PA, Millett, C, Kinra, S, Prabhakaran, D. Role of mobile phone technology in tobacco cessation interventions. *Global Heart*. 2012; 7:167-74.
- Anchala, R, Parakkad, A, Nair, S. CAPSMART- Capacity building of front line health workers by smartphone enabled training based on community derived decision markers for primary prevention and health promotion of non-communicable diseases. *GSTF Journal of BioSciences*. 2012; 1:43-7.
- Anchala, R, Pinto, MP, Shroufi, A, Chowdhury, R, Sanderson, J, Johnson, L, Blanco, P, Prabhakaran, D, Franco, OH.

The role of decision support system (DSS) in prevention of cardiovascular disease: a systematic review and meta-analysis. *PLoS One.* 2012; 7:e47064.

- 11. Arora, M, Madhu, R. Banning smokeless tobacco in India: Policy analysis. *Indian J Cancer.* 2012; 49:336-41.
- 12. Arora, M, Millett, C, Reddy, KS. Tobacco and CVD: Challenges and opportunities. *Global Heart.* 2012; 7:95-8.
- Arora, M, Nazar, GP, Gupta, VK, Perry, CL, Reddy, KS, Stigler, MH. Association of breakfast intake with obesity, dietary and physical activity behavior among urban school-aged adolescents in Delhi, India: results of a cross-sectional study. *BMC Public Health.* 2012; 12:881.
- Arrow, KJ, Danzon, PM, Gelband, H, Jamison, D, Laxminarayan, R, Mills, A, Mwabu, G, Panosian, C, Peto, R, White, NJ. The affordable medicines facility-malaria: killing it slowly. *Lancet.* 2012; 380:1889-90.
- Azhar, GS. Physician shortage: Bottlenecks in financing, managing, training and a rush for specialization. *Nat J Med All Sci.* 2012; 1:1-5.

- 16. **Azhar, GS,** Azhar, AZ. Teleshopping for health. *Lancet.* 2012; 380:e8-e9.
- Azhar, GS, Azhar, AZ, Azhar, AS. Overwork among residents in India: A medical resident's perspective. J Fam Med Primary Care. 2012; 1:141-3.
- Babu, G, Sathyanarayana, TN, Jana, S, Nandy, S, Farid, M, Sadhana, SM. Role of catch-up campaigns in improving immunization services in a developing country. *Ann Trop Med Public Health*. 2012; 5:441-6.
- Babu, GR, Ramachandra, SS, Garikipati, U, Mahapatra, T, Mahapatra, S, Narayana, S, Pant, H. Maternal health correlates of neonatal deaths in a tribal area in India. The Internet Journal of Epidemiology. 2012; 10.
- Bauman, AE, Reis, RS, Sallis, JF, Wells, JC, Loos, RJ, Martin, BW, Collaborators from India: Goenka, S, for the Lancet Physical Activity Series Working Group. Correlates of physical activity: why are some people physically active and others not? Lancet. 2012; 380:258-71.
- 21. Beaglehole, R, Bonita, R, Horton, R, Ezzati, M, Bhala, N, Amuyunzu-Nyamongo, M, Mwatsama, M, **Reddy, KS.** Measuring progress on NCDs: one goal and five targets. *Lancet.* 2012; 380:1283-5.
- 22. Bekibele, CO, **Murthy, GVS.** Barriers to cataract surgery of persons screened at camps in Ibadan, Nigeria. *Afr J Med Sci.* 2012; 41:257-64.
- Bele, S, Bodhare, TN, Mudgalkar, N, Saraf, A, Valsangkar, S. Health-related quality of life and existential concerns among patients with end-stage renal disease. *Indian J Palliat Care.* 2012; 18:103-8.

- Bettadapura, GS, Donthi, K, Datti, NP, Ranganath, BG, Shamanna, BR, Jayaram, TS. Assessment of avoidable blindness using the rapid assessment of avoidable blindness methodology. N Am J Med Sci. 2012; 4:389-93.
- Birnie, K, Ben-Shlomo, Y, Gunnell, D, Ebrahim, S, Bayer, A, Gallacher, J, Holly, JM, Martin, RM. Childhood milk consumption is associated with better physical performance in old age. *Age Ageing.* 2012; 41:776-84.
- Bourne, R, Price, H, Stevens, G, Dandona, L, Dandona, R, For Global Burden of Disease Vision Loss Expert Group. Global burden of visual impairment and blindness. *Arch Ophthalmol-Chic.* 2012; 130:645-7.
- Bowen, L, Bharathi, AV, Kinra, S, Destavola, B, Ness, A, Ebrahim, S. Development and evaluation of a semi-quantitative food frequency questionnaire for use in urban and rural India. *Asia Pac J Clin Nutr.* 2012; 21:355-60.
- Brahmapurkar, KP, Lanjewar, AG, Zodpey, SP, Brahmapurkar, VK, Khakse, GM, Thakre, SB, Giri, VC. Heat stress and its effect in glass factory workers of central India. *International Journal of Engineering Research & Technology.* 2012; 1:1-13.
- CARRS trial writing group, Shah, S, Singh, K, Ali, MK, Mohan, V, Kadir, MM, Unnikrishnan, AG, Sahay, RK, Varthakavi, P, Dharmalingam, M, Viswanathan, V, Masood, Q, Bantwal, G, Khadgawat, R, Desai, A, Sethi, BK, Shivashankar, R, Ajay, VS, Reddy, KS, Narayan, KM, Prabhakaran, D, Tandon, N. Improving diabetes care: multi-component cardiovascular disease risk reduction strategies for people with diabetes in South Asia-the CARRS Multi-center translation trial. *Diabetes Res Clin Pract.* 2012; 98:285-94.

- Channon, AA, Andrade, MV, Noronha, K, Leone, T, Dilip, TR. Inpatient care of the elderly in Brazil and India: Assessing social inequalities. Soc Sci Med. 2012; 75:2394-402.
- Charan, J, Goyal, JP, Saxena, DB, Yadav, P. Vitamin D for prevention of respiratory tract infections: A systematic review and metaanalysis. J Pharmacol Pharmacother. 2012; 3:300-3.
- Chockalingam, A, Tolunay, HE, Prabhakaran, D, Narula, J. Household air pollution: an emerging risk factor for CVD. Global Heart. 2012; 7:197-9.
- Choi, M, Prieto-Merino, D, Dale, C, Nuesch, E, Amuzu, A, Bowling, A, Ebrahim, S, Casas, JP. Effect of changes in moderate or vigorous physical activity on changes in health-related quality of life of elderly British women over seven years. Qual Life Res. 2012:[Epub ahead of print].
- Dandona, L. New report suggests UK-India partnership to improve primary healthcare *BMJ*. 2012; 344:e3410.
- Deodhar, SY, Mahandiratta, S, Ramani, KV, Mavalankar, DV, Ghosh, S, Braganza, V. An evaluation of mid day meal scheme. *Journal* of Indian School of Political Economy. 2012; 22:33-48.
- Dhillon, PK, Kenfield, SA, Stampfer, MJ, Giovannucci, EL, Chan, JM. Aspirin use after a prostate cancer diagnosis and cancer survival in a prospective cohort. *Cancer Prev Res (Phila)*. 2012; 5:1223-8.
- Dilip, TR. Why use consumer expenditure survey for analysis of the RSBY? *Econ Polit Wkly.* 2012; XLVII:75-6.

- Dilip, TR. On publicly-financed health insurance schemes. *Econ Polit Wkly.* 2012; XLVII:79-80.
- Downs, SM, Thow, AM, Ghosh-Jerath, S, McNab, J, Reddy, KS, Leeder, SR. From Denmark to Delhi: the multisectoral challenge of regulating trans fats in India. *Public Health Nutr.* 2012:1-8.
- 40. **Ebrahim, S.** The lights went out. *Int J Epidemiol.* 2012; 41:1213-7.
- 41. Engelgau, MM, **Karan, A,** Mahal, A. The Economic impact of Non-communicable Diseases on households in India. *Global Health.* 2012; 8:9.
- 42. Fan, VY, **Karan, A,** Mahal, A. State health insurance and out-of-pocket health expenditures in Andhra Pradesh, India. *Int J Health Care Finance Econ.* 2012; 12:189-215.
- Ghaffar, A, Tran, NT, Reddy, KS, Kasonde, J, Bajwa, T, Ammar, W, Ren, M, Rottingen, JA, Mills, A. Changing mindsets in health policy and systems research. *Lancet.* 2012; 381:436-7.
- Ghosh, R, Sharma, AK. Missing female fetus: a micro level investigation of sex determination in a periurban area of northern India. *Health Care Women Int.* 2012; 33:1020-34.
- 45. Gurbel, PA, Erlinge, D, Ohman, EM, Neely, B, Neely, M, Goodman, SG, Huber, K, Chan, MY, Cornel, JH, Brown, E, Zhou, C, Jakubowski, JA, White, HD, Fox, KA, **Prabhakaran, D,** Armstrong, PW, Tantry, US, Roe, MT, for the TRILOGY ACS Platelet Function Substudy Investigators. Platelet function during extended prasugrel and clopidogrel therapy for patients with ACS

treated without revascularization: the TRILOGY ACS platelet function substudy. *JAMA*. 2012; 308:1785-94.

- Hallal, PC, Andersen, LB, Bull, FC, Guthold, R, Haskell, W, Ekelund, U, Collaborators from India: **Goenka, S,** for the Lancet Physical Activity Series Working Group. Global physical activity levels: surveillance progress, pitfalls, and prospects. *Lancet*. 2012; 380:247-57.
- Hazarika, I. Risk factors for HIV-1 infection in India: evidence from the National Family Health Survey. *Int J STD AIDS*. 2012; 23:729-35.
- Herzog, CM, Dey, S, Hablas, A, Khaled, HM, Seifeldin, IA, Ramadan, M, El-Hamzawy, H, Wilson, ML, Soliman, AS. Geographic distribution of hematopoietic cancers in the Nile delta of Egypt. *Ann Oncol.* 2012; 23:2748-55.
- Huffman, MD, Bloomfield, GS, Lisandro, DC, Prabhakaran, P, Ajay, VS, Lewison, G, Prabhakaran, D. Abstract P776: Cardiovascular research output and average citation index of Argentina, India, and South Africa: A Bibliometric Approach. *Circulation.* 2012; 125:e890.
- Hussain, MA, Pati, S, Swain, S, Prusty, M, Kadam, S, Nayak, S. Pattern and trends of cancer in Odisha, India: a retrospective study. Asian Pac J Cancer Prev. 2012; 13:6333-6.
- Jaykaran, C, Saxena, DB, Mulla, S. Prophylaxis and treatment for leptospirosis: where are the evidences? *Natl J Physiol Pharm Pharmacol.* 2012; 2:78-83.
- 52. Jena, PK, Bandyopadhyay, C, Mathur, MR, Das, S. Extending application of

the 'hardcore' definition to smokeless tobacco use: estimates from a nationally representative population in India and its implications. *Asian Pac J Cancer Prev.* 2012; 13:5959-63.

- Jena, PK, Kishore, J. Prevalence and correlates of hardcore smoking in India. *Research & Reviews: A Journal of Medicine.* 2012; 2.
- Jena, PK, Kishore, J, Bandyopadhyay, C. Prevalence and patterns of tobacco use in Asia. *Lancet.* 2012; 380:1906; author reply -7.
- 55. Jimenez Soto, E, La Vincente, S, Clark, A, Firth, S, Morgan, A, Dettrick, Z, Dayal, P, Aldaba, BM, Varghese, B, Trisnantoro, L, Prasai, Y, for Investment Case Team for India Indonesia Nepal Papua New Guinea and the Philippines. Developing and costing local strategies to improve maternal and child health: the investment case framework. *PLoS Med.* 2012; 9:e1001282.
- Josyula, L, Sheikh, K, Sathyanarayana, T, Nambiar, D, Narayan, V, Porter, J. Engaging traditional, complementary and alternative health providers for essential health service delivery in India: a policy analysis. *BMC Proc.* 2012; 6:O31.
- 57. Kadam, S, Pati, S, Hussain, MA, Nallala, S, Chakravarty, N, Panda, B, Sahu, B, Chauhan, AS, Ray, S, Swain, S. Assessment of factors influencing retention of health workforce in rural and remote areas of Odisha, India. *BMC Proc.* 2012; 6:O4.
- Kakkar, M. Dengue fever is massively underreported in India, hampering our response. *BMJ*. 2012; 345:e8574.

INDIAN COUNCIL OF MEDICAL RESEARCH

- 59. Kalvakuntla, RR, Singh, PV, **Chokshi**, **M**, Tatambhotla, A. Replicating Tamil Nadu's drug procurement model. *Econ Polit Wkly*. 2012; 47:26-9.
- Kaushik, U, Shrivastava, R, Arora, M, Reddy, KS. Abstract P714: Scaling up a successful school based tobacco use prevention program in India: from efficacy to effectiveness. *Circulation.* 2012; 125:e898.
- Khandelwal, S, Shidhaye, R, Prabhakaran, D, Reddy, KS. Abstract P779: Impact of plant sterols, fish oil omega-3s and their combination on HDL-C in Indian adults. *Circulation.* 2012; 125:e912.
- Kohl, HW, 3rd, Craig, CL, Lambert, EV, Inoue, S, Alkandari, JR, Leetongin, G, Kahlmeier, S, Collaborators from India: Goenka, S, for the Lancet Physical Activity Series Working Group. The pandemic of physical inactivity: global action for public health. Lancet. 2012; 380:294-305.
- 63. **Kumar, G, Mohan, S, Yadav, L, Arora, M.** Global tobacco surveys: information for action by cardiologists. *Global Heart.* 2012; 7:99-105.
- 64. **Kumar, G, Sharma, I,** Kabir, Z. Noncigarette smoking patterns, their health effects and policy options. *Global Heart.* 2012; 7:175-8.
- 65. Kumar, GA, Dilip, TR, Dandona, L, Dandona, R. Burden of out-of-pocket expenditure for road traffic injuries in urban India. *BMC Health Serv Res.* 2012; 12:285.
- 66. Lakra, GJ, Kadam, S, Hussain, MA, Pati, S, Sharma, K, Zodpey, SP. Motivation and job satisfaction among multipurpose health workers in hilly and non-hilly areas of Jashpur District, Chhattisgarh: an exploratory

# study. Southeast Asian J Trop Med Public Health. 2012; 43:1262-72.

- Lakshmy, R, Mathur, P, Gupta, R, Shah, B, Anand, K, Mohan, V, Desai, NG, Mahanta, J, Joshi, PP, Thankappan, KR. Measurement of cholesterol and triglycerides from a dried blood spot in an Indian Council of Medical Research-World Health Organization multicentric survey on risk factors for noncommunicable diseases in India. J Clin Lipidol. 2012; 6:33-41.
- Lakshmy, R, Prabhakaran, D, Tarik, M, Gupta, R, Reddy, KS. LDL particle heterogeneity, and its association with other established cardiovascular risk factors in a young Indian industrial population. *Heart Asia.* 2012; 4:141-5.
- Lakshmy, R, Vemparala, K, Roy, A, Bahl, VK, Prabhakaran, D, Sinha, S, Pandey, RM, Nath, N, Reddy, KS. Abstract P318-Endothelial progenitor cell senescence in premature CAD patients. *Circulation.* 2012; 125:e317.
- Lal, P, Wilson, NC, Srivastava, S, Millett, C. Should the legal age for the purchase of tobacco be increased to 21 Years? *Global Heart.* 2012; 7:183-7.
- 71. Laxminarayan, R. A matter of life and death: the economics of antibiotic resistance. *The Milken Institute Review.* 2012; 3rd Quarter:13-21.
- 72. Laxminarayan, R, Arrow, K, Jamison, D, Bloom, BR. Public Health. From financing to fevers: lessons of an antimalarial subsidy program. *Science*. 2012; 338:615-6.
- 73. Lee, IM, Shiroma, EJ, Lobelo, F, Puska, P, Blair, SN, Katzmarzyk, PT, Collaborators from India: **Goenka, S,** for the Lancet

Physical Activity Series Working Group. Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. *Lancet.* 2012; 380:219-29.

- Lund, C, Tomlinson, M, De Silva, M, Fekadu, A, Shidhaye, R, Jordans, M, Petersen, I, Bhana, A, Kigozi, F, Prince, M, Thornicroft, G, Hanlon, C, Kakuma, R, McDaid, D, Saxena, S, Chisholm, D, Raja, S, Kippen-Wood, S, Honikman, S, Fairall, L, Patel, V. PRIME: A Programme to Reduce the Treatment Gap for Mental Disorders in Five Low- and Middle-Income Countries. *PLoS Med.* 2012; 9:e1001359.
- Madhu, R. Prioritizing research on multistakeholder approach to improve physical activity among adolescents in India. *Global Journal of Medicine and Public Health*. 2012; 1:1-2.
- 76. **Madhu, R.** Re: More health professionals for rural India. *BMJ*. 2012; 345:e8339.
- Madhu, R, Beinum, Av. A systematic review of community hand washing interventions leading to changes in hygiene behavior in the developing world. *Global Journal of Medicine and Public Health.* 2012; 1:49-56.
- Madhu, R, Jain, N. Yoga camp in ayurvedgrams of Chhattisgarh. J Ayurveda Integr Med. 2012; 3:63-4.
- Madhu, R, Neu, DM. Framing child nutrition in developing countries: a human security perspective. *Global Health Governance-Fall.* 2012; 6:1-17.
- 80. **Malhotra, S, Zodpey, SP,** Chandra, S, Vashist, RP, Satyanaryana, S, Zachariah, R, Harries, AD. Should sputum smear

examination be carried out at the end of the intensive phase and end of treatment in sputum smear negative pulmonary TB patients? *PLoS One.* 2012; 7:e49238.

- Mathur, MR, Chaman, P, Bose, V.
   E-networks for improving public health education and practice in low and middle income countries: Introduction public health global network. *Global Journal of Medicine* and Public Health. 2012; 1:56-8.
- Mathur, MR, Prabhakaran, D. Tobacco and CVD: A historical perspective. *Global Heart*. 2012; 7:107-11.
- Mathur, N, Basu, A, Arora, M, Reddy, KS. Abstract P718: Building tobacco control capacity in India through short-term and long-term E-learning distance education programmes. *Circulation*. 2012; 125:e899.
- 84. Mendenhall, E, Shivashankar, R, Tandon, N, Ali, MK, Venkat Narayan, KM, Prabhakaran, D. Stress and diabetes in socioeconomic context: a qualitative study of urban Indians. Soc Sci Med. 2012; 75:2522-9.
- 85. Modugu, HR, Kumar, M, Kumar, A, Millett, C. State and socio-demographic group variation in out-of-pocket expenditure, borrowings and Janani Suraksha Yojana (JSY) programme use for birth deliveries in India. BMC Public Health. 2012; 12:1048.
- Mohanty, A, Chakravarty, N. An epidemiological study of common drugs in the health supply chain: Where does the compass point? *Journal of Humanitarian Logistics and Supply Chain Management*. 2012:1-16.
- Moore, SC, Gunter, MJ, Daniel, CR, Reddy, KS, George, PS, Yurgalevitch, S, Devasenapathy, N, Ramakrishnan, L,

Chatterjee, N, Chanock, SJ, Berndt, SI, Mathew, A, **Prabhakaran, D,** Sinha, R. Common genetic variants and central adiposity among Asian-Indians. *Obesity* (*Silver Spring*). 2012; 20:1902-8.

- Moran, AE, Oliver, JT, Mirzaie, M, Forouzanfar, MH, Chilov, M, Anderson, L, Morrison, JL, Khan, A, Zhang, N, Haynes, N, Tran, J, Murphy, A, DeGennaro, V, Roth, G, Zhao, D, Peer, N, Pichon-Riviere, A, Rubinstein, A, Pogosova, N, Prabhakaran, D, Naghavi, M, Ezzati, M, Mensah, GA. Assessing the global burden of Ischemic heart disease: Part 1: Methods for a systematic review of the global epidemiology of Ischemic heart disease in 1990 and 2010. *Global Heart.* 2012; 7:315-29.
- Mukhopadhyay, I. Health system strengthening and the importance of public investment: a study of National Rural Health Mission in Bihar. *BMC Proc.* 2012; 6:O11.
- Munafo, MR, Timofeeva, MN, Morris, RW, Prieto-Merino, D, Sattar, N, Brennan, P, Johnstone, EC, Relton, C, Johnson, PC, Walther, D, Whincup, PH, Casas, JP, Uhl, GR, Vineis, P, Padmanabhan, S, Jefferis, BJ, Amuzu, A, Riboli, E, Upton, MN, Aveyard, P, Ebrahim, S, Hingorani, AD, Watt, G, Palmer, TM, Timpson, NJ, Group, ES, Davey Smith, G. Association between genetic variants on chromosome 15q25 locus and objective measures of tobacco exposure. J Natl Cancer Inst. 2012; 104:740-8.
- 91. **Murali Prasad, MR.** Quick response (QR) code to promote library services: an introduction. *Journal of Library and Information Science.* 2012; 37:1-9.
- 92. **Murali Prasad,** MR, Kumar, VB. Specialty medical blogs: a tool to disseminate health

information. *Nat J Res Com Med.* 2012; 1:178-241.

- Murali Prasad, MR, Reddy, SHK. An analysis of research in mental retardation in India. *Indian Association of Special Libraries and Infomation Centres Bulletin.* 2012; 57:89-101.
- 94. **Nair, M,** Ariana, P, Webster, P. What influences the decision to undergo institutional delivery by skilled birth attendants? A cohort study in rural Andhra Pradesh, India. *Rural Remote Health.* 2012; 12:2311.
- 95. Nair, M, Ohuma, E, Ariana, P, Webster, P, Gray, R. Effect of the Mahatma Gandhi National Rural Employment Guarantee Act on malnutrition of children aged between 1 and 12 months in Rajasthan, India: a mixed methods study. *Lancet.* 2012; 380:S9.
- 96. **Nair, M, Prabhakaran, D.** Why do South Asians have high risk for CAD? *Global Heart*. 2012; 7:307-14.
- Nair, M, Webster, P. Health professionals' migration in emerging market economies: patterns, causes and possible solutions. J Public Health (Oxf). 2012; 35:157-63.
- Nakkeeran, N. Unregulated private health care in India: The case of a Kolkata hospital fire. *Indian J Public Health.* 2012; 56:246-7.
- 99. Nakkeeran, N. Poor Methodology. Econ Polit Wkly. 2012; 47.
- Nambiar, D. A comparison of data sources and models to project HRH needs in India: lessons from the universal health coverage planning process. *BMC Proc.* 2012; 6:P11.

- 101. Nambiar, D, Saligram, P, Sheikh, K. Does 'giving' influence governance? Application of a framework describing the role of private philanthropy in Indian national health priority setting. *BMC Proc.* 2012; 6:P5.
- 102. Nambiar, D, Sheikh, K, Verma, N. Scale-up of community action for health: lessons from a realistic evaluation of the Mitanin program in Chhattisgarh, *India. BMC Proc.* 2012; 6:O26.
- Nanchahal, K, Power, T, Holdsworth, E, Hession, M, Sorhaindo, A, Griffiths, U, Townsend, J, Thorogood, N, Haslam, D, Kessel, A, Ebrahim, S, Kenward, M, Haines, A. A pragmatic randomised controlled trial in primary care of the Camden Weight Loss (CAMWEL) programme. *BMJ Open.* 2012; 2:e000793.
- Narayanan, G, Prabhakaran, D. Integrating mental health into cardiovascular disease research in India. *Natl Med J India.* 2012; 25:274-80.
- 105. Narula, J, **Prabhakaran, D.** Tobacco and CVD. *Global Heart.* 2012; 7:i-ii.
- 106. Nazar, GP, Arora, M, Gupta, VK, Singh, D, Sargent, JD. Abstract P183: Exposure to alcohol in Bollywood movies and its impact on alcohol use among urban indian adolescents. *Circulation*. 2012; 125:e703-e4.
- 107. Panda, B, Rout, A, Pati, S, Chauhan, AS, Tripathy, A, Shrivastava, R, Bassi, A. Tobacco control law enforcement and compliance in Odisha, India - implications for tobacco control policy and practice. Asian Pac J Cancer Prev. 2012; 13:4631-7.
- 108. Panda, R, Mathur, MR, Divya, P, Srivastava, S, Ramachandra, SS. Health system

preparedness for tobacco control: situational analysis of existing health programs in Andhra Pradesh, India. *Asian Pac J Cancer Prev.* 2012; 13:5969-73.

- Pandey, A, Hasan, H, Sharma, K, Zodpey, S. Emerging need for health policy teaching in India. *Indian J Public Health.* 2012; 56:210-3.
- 110. Pati, S. Integration of behavioral health services into primary care practice: a needs assessment study in urban Bhubaneswar, Odisha, India. *Int J Behav Med.* 2012; 19:S147.
- Pati, S. Energizing Nutrition Education in Medical Curriculum. *The Journal of SCB Medical College*. 2012; 27:125-8.
- 112. Pati, S, Chauhan, AS. Health Promotion: An integral discipline of public health. South East Asia Journal of Public Health. 2012; 2:3-7.
- 113. **Prabhakaran, D, Jeemon, P.** Should your family history of coronary heart disease scare you? *Mt Sinai J Med.* 2012; 79:721-32.
- 114. Pratt, M, Sarmiento, OL, Montes, F, Ogilvie, D, Marcus, BH, Perez, LG, Brownson, RC, Collaborators from India: Goenka, S, for the Lancet Physical Activity Series Working Group. The implications of megatrends in information and communication technology and transportation for changes in global physical activity. *Lancet.* 2012; 380:282-93.
- 115. Rafiq, S, Venkata, KK, Gupta, V, Guru, VD, Spurgeon, CJ, Parameshwaran, S, Madana, SN, Kinra, S, Bowen, L, Timpson, NJ, Smith, GD, Dudbridge, F, Prabhakaran, D, Ben-Shlomo, Y, Reddy, KS, Ebrahim, S, Chandak, GR. Evaluation of seven common lipid associated loci in a large Indian sib pair study. *Lipids Health Dis.* 2012; 11:155.

- Ramakrishnan, U, Lowe, A, Vir, S, Kumar, S, Mohanraj, R, Chaturvedi, A, Noznesky, EA, Martorell, R, Mason, JB. Public health interventions, barriers, and opportunities for improving maternal nutrition in India. *Food Nutr Bull.* 2012; 33:S71-92.
- 117. Raman, V, Sheikh, K, Saligram, P, Verma, N, Sharma, N. Governance 'tool kits' for universal health coverage in India: guidelines for implementing the Expert Group's recommendations. *BMC Proc.* 2012; 6:08.
- 118. Rani, MA, Shriraam, V, Zachariah, R, Harries, AD, Satyanarayana, S, **Tetali, S, Anchala, R,** Muthukumar, D, Sathiyasekaran, BWC. Does a nutrition education programme change the knowledge and practice of healthy diets among high school adolescents in Chennai, India? *Health Education Journal.* 2012:[Epub ahead of print].
- 119. **Rao, KD.** How to attract health workers to rural areas? Findings from a discrete choice experiment in India. *BMC Proc.* 2012; 6:O1.
- 120. **Rao, KD,** Bhatnagar, A, Berman, P. So many, yet few: Human resources for health in India. *Hum Resour Health.* 2012; 10:19.
- 121. Reddy, H, Pradhan, MR, Ghosh, R, Khan, AG. India's progress towards the Millennium Development Goals 4 and 5 on infant and maternal mortality. WHO South-East Asia Journal of Public Health. 2012; 1:279-89.
- 122. **Reddy, KS,** for the GHME conference organising committee. Global health metrics and evaluation: a call for abstracts. *Lancet.* 2012; 380:1722.
- 123. Sadhu, G, Chakravarty, N. Gender mainstreaming in water management. International Journal of Scientific and Research Publications. 2012; 2:1-9.
142

- Sahu, B, Hutter, I. 'Lived Islam' in India and Bangladesh: negotiating religion to realise reproductive aspirations. *Cult Health Sex.* 2012; 14:521-35.
- 125. Salahuddin, S, **Prabhakaran, D,** Roy, A. Pathophysiological mechanisms of tobaccorelated CVD. *Global Heart.* 2012; 7:113-20.
- Sarkar, BK. Re: Gutkha wars: India toughens up on oral tobacco use. *BMJ*. 2012; 345:e8238.
- 127. Sarkar, BK. Re: More health professionals for rural India. *BMJ.* 2012; 345:e8339.
- 128. **Sathyanarayana, TN, Babu, GR, Kadam, S.** Barriers, challenges and possible solutions in establishing diabetes self-management education (DSME) in India: a policy perspective. *International Journal of User-Driven Healthcare* 2012; 2.
- 129. Saxena, DB, Kumar, P, Rana, M, Shah, HM. A case study on use of modified delphi technique for developing consensus on designing contents of a module for imparting sex education to adolescents in schools, in India. *Global Journal of Medicine and Public Health.* 2012; 1:3-7.
- Schneider, J, Kumar, R, Dandona, R, Kumar, P, Kumar, A, Lakshmi, V, Laumann, E, Mayer, K, Dandona, L. Social network and risktaking behavior most associated with rapid HIV testing, circumcision, and preexposure prophylaxis acceptability among high-risk Indian men. *AIDS Patient Care STDS*. 2012; 26:631-40.
- Selvaraj, S, Hasan, H. Draft drug price policy 2011: Legitimising unaffordable medicine prices? *Econ Polit Wkly*. 2012; 47:13-7.

- Selvaraj, S, Subramanian , SV. Financial risk protection & chronic disease care. *Indian J Med Res.* 2012; 136:544-6.
- Seshadri, T, Trivedi, M, Saxena, DB, Soors, W, Criel, B, Devadasan, N. Impact of RSBY on enrolled households: lessons from Gujarat. *BMC Proc.* 2012; 6:O9.
- 134. **Sheikh, K.** Analyzing power in health systems: the case of medical dominance in India. *BMC Proc.* 2012; 6:O6.
- Sheikh, K, Raman, V, Mayra, K. Nurturing nursing in India: need for governance reform. *BMC Proc.* 2012; 6:O32.
- 136. Sheppard, AJ, Salmon, C, Balasubramaniam, P, Parsons, J, Singh, G, Jabbar, A, Zaidi, Q, Scott, A, Nisenbaum, R, Dunn, J, Ramsay, J, Haque, N, O'Campo, P. Are residents of downtown Toronto influenced by their urban neighbourhoods? Using concept mapping to examine neighbourhood characteristics and their perceived impact on self-rated mental wellbeing. Int J Health Geogr. 2012; 11:31.
- 137. Shidhaye, P, Giri, P, Nagaonkar, S, Shidhaye, RR. Study of knowledge and attitude regarding Prenatal Diagnostic Techniques Act among the pregnant women at a tertiary care teaching hospital in Mumbai. J Edu Health Promot. 2012; 1:36.
- Shidhaye, P, Giri, P, Nagaonkar, S, Shidhaye, RR. Prevalence of anemia in the postnatal women at a tertiary care teaching hospital in Mumbai. J Med Nutr Nutraceut 2012; 1:54-7.
- Shidhaye, P, Shidhaye, RR. Statistical methods: Regression analysis in mental health research: concept and interpretation. *Archives of Indian Psychiatry*. 2012; 14:51-9.

- Shrivastav, R, Nazar, GP, Stigler, MH, Arora, M. Health promotion for primordial prevention of tobacco use. *Global Heart*. 2012; 7:143-50.
- 141. Shukla, A, Philip, A, Zachariah, A, Phadke, A, Suneetha, A, Davar, B, Srinivasan, C, Mankad, D, Qadeer, I, Kalathil, J, Lalita, K, Sajaya, K, Jacob, K, Balimahabal, K, Gupte, M, Rao, M, Salie, M, Prakash, P, Chatterjee, P, Baru, R, Melkote, R, **Shukla, R,** Gaitonde, R, Bisht, R, Duggal, R, Khanna, R, Priya, R, Srivatsan, R, Timimi, S, Sarojini, N, Sathyamala, C, Ashtekar, S, Fernando, S, Tharu, S, Shatrugna, V. Critical perspectives on the NIMH initiative "Grand Challenges to Global Mental Health". *Indian J Med Ethics.* 2012; 9:289-94.
- 142. Sidney, K, de Costa, A, Diwan, V, Mavalankar, DV, Smith, H, Matind study team. An evaluation of two large scale demand side financing programs for maternal health in India: the MATIND study protocol. *BMC Public Health.* 2012; 12:699.
- 143. Singh, A, Zodpey, SP, Gaidhane, AM, Zahiruddin, QS. Strengthening health systems to address child health. Int J Child Health Hum Dev. 2012; 5:283-8.
- 144. Singh, R, Zodpey, SP, Sharma, K, Bangdiwala, SI, Ughade, S. Landscaping biostatistics education in India. *Indian J Public Health.* 2012; 56:273-80.
- 145. Somsekhar, H, Prabhakaran, D, Tandon, N, Rousselle, R, Fisher, S, Stein, AD. Review of multinational human subjects research: experience from the PHFI-Emory Center of Excellence partnership. *Indian J Med Ethics.* 2012; 9:255-8.

## Journal of Health Management

- 146. Sovio, U, Giambartolomei, C, Kinra, S, Bowen, L, Dudbridge, F, Nitsch, D, Smith, GD, Ebrahim, S, Ben-Shlomo, Y. Early and current socio-economic position and cardiometabolic risk factors in the Indian Migration Study. *Eur J Prev Cardiol.* 2012:[Epub ahead of print].
- 147. Sreeramareddy, CT, Sathyanarayana, TN, Kumar, HNH. Utilization of health care services for childhood morbidity and associated factors in India: a national crosssectional household survey. *PLoS One.* 2012; 7:e51904.
- 148. Taylor, AE, Kuper, H, Varma, RD, Wells, JC, Bell, JD, Radhakrishna, KV, Kulkarni, B, Kinra, S, Timpson, NJ, **Ebrahim, S,** Smith, GD, Ben-Shlomo, Y. Validation of dual energy x-ray absorptiometry measures of abdominal fat by comparison with magnetic resonance imaging in an Indian population.

### PLoS One. 2012; 7:e51042.

- 149. Taylor, F, **Ebrahim, S.** Statins work just as well in women as in men. *Arch Intern Med.* 2012; 172:919-20.
- 150. **Tetali, S, Josyula, L, K.,** Gupta, S, Gopalakrishna, G. Collecting Road Traffic Injury (RTI) data: barriers and enablers experienced by research personnel. *Inj Prev.* 2012; 18:A242.
- Tiwari, RR, Sharma, K, Zodpey, SP. Situational analysis of nursing education and work force in India. *Nurs Outlook.* 2012; 61:129-36.
- 152. **Trivedi, M,** Gupta, I. HIV insurability in India: early history and current status. *J Health Manag.* 2012; 14:435-50.
- 153. Wadhwaniya, S, Gupta, S, **Tetali, S,** Hyder, A. The validity of self-reported helmet-use

among motorcyclists in India. *Inj Prev.* 2012; 18:A197.

- Yadav, A, Chatterjee, M. India: Point of sale graphic warnings. *Tob Control.* 2012; 21:458.
- 155. Yadav, A, Yadav, L. India: Laying the groundwork for plain packaging. *Tob Control.* 2012; 21:524.
- Zodpey, SP, for IPEN Study Group. Injection practice in India. WHO South-East Asia Journal of Public Health. 2012; 1:189-200.
- 157. Zodpey, SP, for The INCLEN Program Evaluation Network (IPEN). Interdistrict variations in child health status and health services utilization: Lessons for health sector priority setting and planning from a crosssectional survey in rural India. *Natl Med J India.* 2012; 25:S1-3.

## **Conference** Presentation

## Jan – Aug 2013

- Abbas, K, Abbas, SS, Rekha, VB, Elvinger, F, 3. Gunaseelan, Kakkar, M. Education, research & practice of "One Health". In: International Conference on Frontiers of Stem Cell and Biotechnology in Human and Veterinary Medicine; 2013, 11th January; Chennai, India.
- Abbas, SS, Kakkar, M. Policy formulation processes for disease surveillance in India. In: 3rd Annual Public Health Foundation of India Research Symposium; 2013, 07th-08th January; New Delhi, India.
- Abbas, SS, Kakkar, M. Rabies control initiative in Tamil Nadu, India: A test case for the "One Health" approach. In: A World United Against Infectious Diseases: Cross Sectoral Solutions; 2013, 28th January-2nd February; Bangkok, Thailand.
- Abbas, SS, Kakkar, M. Identifying research priorities for zoonoses in India. Feasibility of One Health (OH) initiative in Nepal for surveillance of emerging and reemerging zoonotic diseases of public health importance. In: One Health Alliance of

Nepal (OHAN) Coordination Office; 2013, 17th-19th January; Kathmandu, Nepal.

Abbas, SS, Kakkar, M, Rogawski, E. Cost estimation of a state wide rabies control. In: 3rd National Conference of Consortium Against Rabies (CARCON); 2013, 20th April; New Delhi, India.

5.

6.

Abbas, SS, Kakkar, M, Sohal, S. Costing rabies control initiative in Tamil Nadu. In: 3rd Annual Public Health Foundation of India Research Symposium; 2013, 07th-08th January; New Delhi, India.

- Abbas, SS, Kakkar, M, Sohal, S. Parliamentary questions related to disease surveillance in India. In: 3rd Annual Public Health Foundation of India Research Symposium; 2013, 07th-08th January; New Delhi, India.
- Abbas, SS, Kakkar, M, Venkataramana, V. Research-policy disconnect in zoonoses. In: 3rd Annual Public Health Foundation of India Research Symposium; 2013, 07th-08th January; New Delhi, India.
- Abbas, SS, Kakkar, M, Venkataramanan, V. Research-policy disconnect for rabies control in India. In: 3rd National Conference of Consortium Against Rabies (CARCON); 2013, 20th April; New Delhi, India.
- Agrawal, S. Association between food consumption and diabetes among adult Indians: A cross sectional study. In: 8th Asia Pacific Conference on Clinical Nutrition (APCCN); 2013, 09th-12th June; Tokyo, Japan.
- Agrawal, S, Millett, C, Subramanian, SV, Ebrahim, S. Type of vegetarian diet and prevalence of diabetes in adult men and women in India. In: IUNS 20th International Congress of Nutrition; 2013, 15th-20th September; Granada, Spain.
- 12. Azhar, GS. Climate change and health preparedness: Protecting local communities from extreme heat. In: 3rd Annual Public Health Foundation of India Research Symposium; 2013, 07th-08th January; New Delhi, India.
- 13. **Azhar, GS.** Climate change, heat and health: protecting local communities from extreme heat in rapidly urbanising regions of western India In: DRM Learning and Innovation Hub Asia: Mainstreaming Disaster Risk

Management into Climate Compatible Development; 2013, 19th-21st June; Bangkok, Thailand.

- 14. **Azhar, GS.** Climate change, heat and health: protecting local communities from extreme heat in rapidly urbanising regions of western India In: Subnational CCD: Learning from CDKN's experience, Learning Workshop; 2013, 03rd-04th June; Bonn, Germany.
- Babu, GR. Keynote address: Public health and social work in international settings. In: International Conference on Global Public Health and Social work-DYUTI; 2013, 03rd-05th January; Kochi, India.
- Babu, GR. Social determinants of health, right to health & health equity. In: International Conference on Global Public Health and Social work-DYUTI; 2013, 03rd-05th January; Kochi, India.
- Babu, GR, Mahapatra, T, Detels, R. Job stress and hypertension in young software professionals. In: South-East Asia Regional Public Health Conference (IPHACON); 2013, 01st-03rd February; Kolkata, India.
- Babu, GR, Mahapatra, T, Detels, R. Sexual behaviour and association with occupational stress among software professionals of Bengaluru, India. In: South-East Asia Regional Public Health Conference (IPHACON); 2013, 01st-03rd February; Kolkata, India.
- 19. **Bhattacharya, A**, Lyngdoh, W. Discussing social cultural dimension of teenage pregnancy in Meghalaya, India. In: Global Maternal Health Conference; 2013, 15th-17th January; Tanzania, Africa.
- 20. **Bhattacharyya, SK.** Closing the cycle: Evidence to action. In: Global Maternal

Health Conference; 2013, 15th-17th January; Tanzania, Africa.

21. **Bhattacharyya, SK.** Trading off cleanliness: Women's priorities at delivery in Jharkhand, India. In: Global Maternal Health Conference; 2013, 15th-17th January; Tanzania, Africa.

- Borhade, A, Singh, A. Migrants access to health care. In: 3rd Annual Public Health Foundation of India Research Symposium; 2013, 07th-08th January; New Delhi, India.
- 23. **Chatterjee, S.** Costing study: Data collection and analysis: tools, templates and techniques. In: 2nd Joint Learning Network Costing Collaborative Group Meeting; 2013, 25th-27th February; Jakarta, Indonesia.
- 24. **Chatterjee, S, Laxminarayan, R.** Unit cost of hospital services at different hospitals in India. In: International Health Economics Association (iHEA) conference on Celebrating Health Economics; 2013, 07th-10th July; Sydney, Australia.
- 25. **Chatterjee, S, Laxminarayan, R.** Unit cost of hospital services at different hospitals in India. In: Health Economics Association of India (HEAI) conference on Strengthening Health Systems in India: What Works and What Lies Ahead; 2013, 29th- 31st May; Chennai, India.
- Chatterjee, S, Laxminarayan, R. Unit cost of medical services at different hospitals in India. In: 3rd Annual Public Health Foundation of India Research Symposium; 2013, 07th-08th January; New Delhi, India.
- Dey, S, Dhillon, PK, Wardle, J, Santos, D, Silva, I. Breast cancer awareness: Evaluation of a campaign and planning further dissemination. In: 3rd Annual Public Health

Foundation of India Research Symposium; 2013, 07th-08th January; New Delhi, India.

- Dhillon, PK, Dey, S, Magsumbol, M. Occupational exposure to pesticides and breast cancer. In: 3rd Annual Public Health Foundation of India Research Symposium; 2013, 07th-08th January; New Delhi, India.
- 29. Downs, S, **Gupta, V, Ghosh-Jerath, S,** Lock, K, Singh, A. Reformulating partially hydrogenated vegetable oils to maximize health gains in India: An industry perspective. In: IUNS 20th International Congress of Nutrition; 2013, 15th-20th September; Granada, Spain.
- Downs, S, Thow, AM, Ghosh-Jerath, S, Leeder, S. The feasibility of multisectoral policies aimed at reducing trans fat in India. In: IUNS 20th International Congress of Nutrition; 2013, 15th-20th September; Granada, Spain.
- 31. **Gera, R, Sharma, A, Singh, P.** Tracking every mother and child to improve the routine immunization through Mother and Child Tracking System (MCTS). In: 3rd Annual Public Health Foundation of India Research Symposium; 2013, 07th-08th January; New Delhi, India.
- Ghosh-Jerath, S, Devasenapathy, N, Singh, A, Zodpey, SP. Nutritional vulnerability of under-5 children in urban poor settlements of Delhi, India: need for aligning policy to food consumption pattern. In: IUNS 20th International Congress of Nutrition; 2013, 15th-20th September; Granada, Spain.
- Ghosh-Jerath, S, Singh, A, Magsumbol, M, Kamboj, P, Goldberg, G. Indigenous and tribal foods for addressing food and nutrition security in two tribal communities of Jharkhand, India. In: IUNS 20th International

Congress of Nutrition; 2013, 15th-20th September; Granada, Spain.

- 34. Jotheeswaran, AT. Prevention and management of dependency among frail older people within primary health care in India: Challenges and Opportunities. In: World Health Organization (WHO) high level meeting; 2013, 25th-26th April; The Hague, Netherlands.
- Kakkar, M, Abbas, SS, Rogawski, E. Research-policy disconnect for rabies control in India. In: National Symposium on Recent Advances in Rabies; 2013, 25th March; Bengaluru, Karnataka.
- Kamboj, P, Chadha, R, Ghosh-Jerath,
   S. Nutritional status, severity of sensory sensitivities and feeding problems in children (3-10 years) with pervasive developmental disorders. In: IUNS 20th International Congress of Nutrition; 2013, 15th-20th September; Granada, Spain.
- Khandelwal, S. Program and policy options for preventing obesity in the low, middle, and transitional income countries. In: High Level Meeting for International Policy Discussion 2013, 16th-21st June; Bellagio, Italy.
- Khandelwal, S. Emory experience and future prospects of the training received. In: CoE- CARRS Research Symposium; 2013, 08th-09th February; New Delhi, India.
- Kumar, M, Chokshi, M, Banta, D, Gabby, J. A proposed framework for integration of health technology assessment in policy in India. In: 10th Annual Conference of Health Technology Assessment International (HTAi); 2013, 17th-19th June; Seoul, South Korea.
- 40. Kumar, M, Taylor, F, **Chokshi, M,** Shah, E, Gabby, J. Health technology assessment

in India; Overcoming the obstacles for improved health care decision making in India. In: 10th Annual Conference of Health Technology Assessment International (HTAi); 2013, 17th-19th June Seoul, South Korea.

- 41. Mohan, S. Hypertension and related comorbidities in India: Implications for the health system. In: A National Brief on High Blood Pressure prepared for the World Health Day; 2013, 07th April; New Delhi, India.
- 42. Neogi, SB, Devasenapathy, N, Singh, R, Ray, S. Ferrous Sucrose in Pregnant Anaemic Women in India (FeSPAW) – An observational study in government healthcare facilities in Tamil Nadu and Uttar Pradesh. In: 3rd Annual Public Health Foundation of India Research Symposium; 2013, 07th-08th January; New Delhi, India.
- 43. **Panda, R.** Factors affecting tobacco use and quitting in India. In: Society for Nicotine and Tobacco Research; 2013, 13th-16th March; Boston, United States of America.
- 44. **Panda, R.** Factors influencing severity of nicotine dependence among the bidi smokers in India. In: Society for Nicotine and Tobacco Research; 2013, 13th-16th March; Boston, United States of America.
- 45. **Panda, R,** Jena, PK. Discordance in the assessment of nicotine dependence of adult smokers in India: A comparison of DSM-IV and FTND. In: Society for Nicotine and Tobacco Research; 2013, 13th-16th March; Boston, United States of America.
- 46. Ramanan, L. Social security: Fixing the glaring gap for employees of semi-organized sector. In: Tomorrow People Organization's Sixth Annual Poverty Alleviation and Social Protection Conference - PSPC 2013; 2013, 09th-11th March; Bangkok, Thailand.

- 47. **Saha, S,** Annear, P, Pathak, S. The effect of self help groups on access to maternal health services: evidence from rural India. In: 2nd Global Maternal Health Conference; 2013, 15th-17th January; Dodoma, Tanzania.
- Saha, S, Nachtnebel, M, Annear, P. Participation in social networks as a determinant for health: Evidence from India. In: World Health Summit Regional Meeting-Asia; 2013, 08th-10th April; Singapore.
- 49. Saxena, D, Nakkeeran, S, Vangani, R, Mavalankar, DV. Trends in institutional deliveries among disadvantaged groups and the impact of intervention in Gujarat: evidence from secondary data analysis In: Global Health Metrics & Evaluation; 2013,

## Aug - Dec 2012

- Abbas, SS, Kakkar, M. Assessing disease surveillance capacity in India. In: 2nd Global Symposium on Health Systems Research; 2012, 31st October-03rd November; Beijing, People's Republic of China.
- 2. **Abbas, SS, Kakkar, M.** Rabies : Exploring intersections between animal welfare and public health. In: The India for Animals (IFA) Conference; 2012, 16th -18th November; Panjim, Goa.
- Abbas, SS, Venkataramanan, V, Kakkar, M. Moving from rabies research to rabies control: Lessons from India. In: 2nd Global Symposium on Health Systems Research; 2012, 31st October-03rd November; Beijing, People's Republic of China.
- Abraham, S, Pradhan, MR, Dias, A, Jha, D, **Dhillon, PK, Ebrahim, S.** The status of depression in persons with and without

17th-19th June; Seatle, United States of America.

- 50. **Sharma, A.** Mother and child tracking system assessment in three states In: 3rd Annual Public Health Foundation of India Research Symposium; 2013, 07th-08th January; New Delhi, India.
- 51. **Sharma, L, Singh, P, Gera, R.** Route planning & route optimization for vaccine supply chain management through geospatial technology. In: 5th International Health GIS Conference 2013, 21st -23rd August; Bangkok, Thailand.
- 52. Singh, A, Gupta, V, Lock, K, Ghosh-Jerath, S. Exploratory assessment of dietary practices

with emphasis on fat intake trends in a rural setting in Haryana, India. In: IUNS 20th International Congress of Nutrition; 2013, 15th-20th September; Granada, Spain.

 Srivastava, A. Assessing what women want: Systematic review of maternal satisfaction with delivery care in developing countries. In: Global Maternal Health Conference; 2013, 15th-17th January; Tanzania, Africa.

Srivastava, A. Incorporating maternal satisfaction in assessments of maternal health services: Evidence from developing countries. In: Global Maternal Health Conference; 2013, 15th-17th January; Tanzania, Africa.

54.

8.

disabilities in a rural setting. In: 18th International Congress of Rural Health and Medicine; 2012, 10th-12th December; Goa, India.

- Arora, M. Tobacco control at multiple settings: Tobacco free schools and communities. In: 43rd Union World Conference on Lung Health; 2012, 13th-17th November; Kuala Lumpur, Malaysia.
- Arora, M. Preventing and controlling youth access to tobacco use: Introducing the IMPACT model from India. In: Innovative Approaches to Tobacco Control: International Conference; 2012, 10th-11th October; Cardiff, United Kingdom.
- Arora, M. Overnutrition in developing and middle-income countries. In: The World Congress of Cardiology Scientific Sessions; 2012; Dubai, United Arab Emirates.

- **Arora, M.** Confronting tobacco use around the world: the search for sustainable approaches. In: The World Congress of Cardiology Scientific Sessions; 2012; Dubai, United Arab Emirates.
- Azhar, GS. Change and health preparedness in India: Protecting local communities in Ahmedabad from extreme heat. In: 3rd National Research Conference on Climate Change, Indian Institute of Science; 2012, 03rd-04th November; Bengaluru, India.
- 10. **Babu, GR.** Analysis of universal health coverage and pointers for future. In: 24th Annual Conference of Karnataka Association of Community Health Professionals; 2012, 03rd November; Bagalkote, India.
- 11. **Balasubramaniam**, **P.** Regulation, governance and institutional arrangements for universal health coverage: where we

# International Journal of STU & AIUS

18.

19.

22.

are at and the way forward (comparing S. Africa, Thailand, Brazil and India, China, and Ghana). In: 2nd Gobal Symbosium on Health Systems Research; 2012, 31st October-03rd November; Beijing, People's Republic of China.

- 12. **Balasubramaniam**, **P.** Universal health coverage and the changed environment for health policy and implementation in LMIC's: A retrospective from bi/multi-laterals, donors & institutions. In: 2nd Global Symposium on Health Systems Research; 2012, 31st October-03rd November; Beijing, People's Republic of China.
- Chakravarty, N, Harmer, A. Social determinats affecting the implementation of ICDS programme in Maharashtra, India. In: International Conference on Public Policy and Governance; 2012, 04th-06th September; Bengaluru, India.
- 14. **Chatterjee, S.** Unit cost of hospital services at different hospitals in India. In: Indian Health Economics and Policy Association (IHEPA) second conference on 'Better health access: the rough road ahead'; 2012, 20th-21st December; Bengaluru, India.
- 15. **Chatterjee, S.** Cost-effectiveness of vaccination programs in India. In: Gynuity's Technical Advisory Group; 2012, 16th November; New Delhi, India.
- 16. **Chatterjee, S.** Costing study experience in India. In: Regional Experiences on Costing Health Care Services; 2012, 03rd-05th October; Kuala Lumpur, Malaysia.
- 17. **Dhillon, PK,** Dias, A, Williams, J, Alam, D, Jha, D, **Ebrahim, S.** Multi-centre, household chronic disease risk factor (CDRF) study in rural Bangladesh, Goa and Tamil Nadu:

Methods and preliminary findings. In: 10th Conference of Indian Association for Social Sciences and Health (IASSH); 2012, 21st-23rd November; New Delhi, India.

- Dhillon, PK, Hasan, K, Islam, S, Islam, S, Jha, D, Davey-Smith, G, Alam, D, Ebrahim, S. Incidence of childhood diarrhea and blood pressure in later life: Matlab, Bangladesh. In: International Conference on Global Public Health; 2012, 03rd-04th December; Colombo, Sri Lanka.
- Dhillon, PK, Jha, D, Alam, D, Dias, A, Williams, J, Ebrahim, S. Multi-centre, household chronic disease risk factor (CDRF) study in rural Bangladesh, Goa and Tamil Nadu: Methods and preliminary findings. In: International Association for Social Sciences Research; 2012, 21st-23rd November; New Delhi, India.
- Dias, A, Dhillon, PK, Jha, D, Abraham, S, Ebrahim, S. Diagnostic and treatment gaps for major chronic diseases in rural Goa. In: 18th International Congress of Rural Health and Medicine; 2012, 10th-12th December; Goa, India.
- Downs, SM, Thow, AM, Chosh-Jerath,
   S, Leeder, SR. Policies influencing the availability, price and marketing of trans fat in India: A food systems approach. In: Population Health Congress; 2012, 09th-12th September Adelaide, Australia.
  - Ganguly, P, Jehan, K, Sidney, K, Mavalankar, DV, Costa, Ad, Smith, H. Exploration of factors influencing private sector participation in Chiranjeevi Yojana in Gujarat, India. In: 2nd Global Symposium on Health Systems Research; 2012, 31st October-03rd November; Beijing, People's Republic of China.

- Gupta, R, Lakshmy, R, Abraham, RA, Jeemon, P, Prabhakaran, D, Reddy, KS. Serum omega-6/omega-3 ratio and risk markers for cardiovascular disease. In: Annual National Conference of Association of Clinical Biochemists of India; 2012, 12th-14th December; Ranchi, India.
- Josyula, L, Sheikh, K, Sathyanarayana, T, Nambiar, D, Narayan, V, Porter, J. Engaging traditional, complementary and alternative health providers for essential health service delivery in India: A policy analysis. In: 2nd National Conference on Bringing Evidence into Public Health Policy; 2012, 05th-06th October; Bengaluru, India.
- 25. Kadam, S, Pati, S, Hussain, MA, Nallala, S, Chakravarty, N, Panda, B, Sahu, B, Chauhan, AS, Ray, S, Swain, S. Assessment of factors influencing retention of health workforce in rural and remote areas of Odisha, India. In: 2nd National Conference on Bringing Evidence into Public Health Policy; 2012, 05th-06th October; Bengaluru, India.
- Kakkar, M. India and emerging infectious diseases challenges. In: The Wildlife Health Bridge Wildlife Health Management for Rural Livelihood Security & Biodiversity Conservation, South Asia under the Darwin Initiative Project; 2012, 11th-12th December; Dehradun, India.
- 27. Kakkar, M. Communication between laboratory personnel and the outbreak investigating team. In: CME on Clinical Microbiology and Public Health at 36th National Conference of the Indian Association of Medical Microbiologists on "Clinical Microbiology: Current Challenges & Future Directions"; 2012, 22nd-25th November; New Delhi; India.

- Kakkar, M, Abbas, SS. Research– policy disconnect in zoonoses prevention and control in India. In: International Symposium on One Health: Way Forward to Challenges in Food Safety and Zoonoses in 21st Century and XI Annual Conference of Indian Association of Veterinary Public Health Specialists (IAVPHS); 2012, 13th December; Ludhiana, India.
- Kakkar, M, Venkataramanan, V. Visceral leishmaniasis vector control assessment in Bihar, India – An ecohealth approach. In: 4th Biennial Conference of the International Association for Ecology and Health: Sustaining Ecosystems, Supporting Health (EcoHealth); 2012, 15th-18th October; Kunming, People's Republic of China.
- Kamboj, P, Chadha, R, Ghosh-Jerath, S. Dietary management of children with pervasive developmental disorders. In: Golden Jubilee Conference of Indian Dietetic Association; 2012, 29th November -01st December; Hyderabad, India.
- Khandelwal, S. Human resource requirement for public health nutrition programming. In: Consultative Workshop on The India Health Report 2012, 07th-08th August; New Delhi, India.
- 32. **Kumar, GA.** Population-based cohort study in a high HIV burden district of India shows higher incidence. In: 13th IUSTI World Congress Conference; 2012, 15th-17th October; Melbourne, Australia.
- Lakshmi, JK. Then, now, and evermore: Systems of health for all times. In: An International Forum State of the Art -Direction for the future Conference; 2012, 06th-09th August; Trondheim, Norway.

- 34. Lakshmi, JK. Healthcare provider physical activity prescription intervention at health promotion research. In: An International Forum State of the Art Direction for the future Conference; 2012, 06th-09th August; Trondheim, Norway.
- 35. Lakshmi, JK, Tetali, S. Participating in an institutional ethics committee: Perceptions, practices, and potential. In: Advancing Ethical Research Conference 2012, 04th-06th December; San Diego, United States of America.
- Madhu, R, Arora, M. Bridging the gap: Local politics and global commitment in tobacco control. In: International Conference on Public Policy and Governance; 2012, 04th-06th September; Bengaluru, India.
- 37. **Mohan, S.** Methods used for measuring population sodium intake in the region. In: Expert Meeting on Population Sodium Reduction Strategies for Prevention and Control of Noncommunicable Diseases in the South-East Asia Region; 2012, 11th-13th December; New Delhi, India.
- Mukhopadhyay, I. Health system strengthening and the importance of public investment: A study of National Rural Health Mission in Bihar. In: 2nd National Conference on Bringing Evidence into Public Health Policy; 2012, 05th-06th October; Bengaluru, India.
- Nair, M, Ohuma, E, Ariana, P, Webster, P, Gray, R. Effect of the Mahatma Gandhi National Rural Employment Guarantee Act on malnutrition of children aged between 1 and 12 months in Rajasthan, India: A mixed methods study. In: New Voices in Global Health, World Health Summit; 2012, 23rd October; Berlin, Germany.

Nambiar, D. A comparison of data sources and models to project HRH needs in India: Lessons from the universal health coverage planning process. In: 2nd National Conference on Bringing Evidence into Public Health Policy; 2012, 05th-06th October; Bengaluru, India.

40.

43.

45.

- Nambiar, D, Saligram, P, Sheikh, K. Does 'giving' influence governance? Application of a framework describing the role of private philanthropy in Indian national health priority setting. In: 2nd National Conference on Bringing Evidence into Public Health Policy; 2012, 05th-06th October; Bengaluru, India.
- 42. **Nambiar, D, Sheikh, K, Verma, N.** Scale-up of community action for health: Lessons from a realistic evaluation of the mitanin program in Chhattisgarh, India. In: 2nd National Conference on Bringing Evidence into Public Health Policy; 2012, 05th-06th October; Bengaluru, India.
  - Narayan, VV, Sheikh, K, Nambiar, D, Lakshmi, JK, Sathyanarayana, TN, Porter, J. Engaging traditional, complementary & alternative medical providers for essential health service delivery in India: Operational and ethical challenges to integration in three states of India. In: 4th National Bioethics Conference; 2012, 07th December; Hyderabad, India.
- Neogi, SB, Shetty, G, Ray, S, Sadhukhan, P, Reddy, SS. Setting up a quality assurance model for newborn care – An intervention to strengthen health system in Bihar, India. In: International Public Health Conference; 2012, 03rd-05th October; Kuala Lumpur, Malaysia.
- **Panda, R.** Integrating tobacco control into health programs in India. In: International

Society for the Prevention of Tobacco Induced Diseases; 2012, 21st –23rd September; Vienna, Austria.

- Panda, R. Using mixed method approach to study systems preparedness for an integrated model of tobacco control. In: 2nd Clobal Symposium on Health Systems Research; 2012, 31st October-03rd November; Beijing, People's Republic of China.
- 47. **Pathak, G.** Informal providers and delivery of public goods among marginalized population: A case study from the Revised National Tuberculosis Control Program (RNTCP), India. In: 2nd Global Symposium on Health Systems Research; 2012, 31st October-03rd November; Beijing, People's Republic of China.
- 48. Pathak, G. Free diagnostic and treatment services under Revised National Tuberculosis Control Program (RNTCP), India: barriers to their full utilization by the marginalized population. In: 2nd Global Symposium on Health Systems Research; 2012, 31st October-03rd November; Beijing, People's Republic of China.
- 49. **Pati, S.** Association of W-6/W-3 fatty acid ratio with metabolic syndrome in India. In: 1st International Congress on Lipidology and Atherosclerosis (ICLA); 2012, 14th-15th September; Seoul, South Korea.
- 50. **Persai, D, Panda, R, Jena, PK.** Communication in tobacco control: The health care provider's perspective. In: 43rd Union World Conference on Lung Health; 2012, 13th-17th November; Kuala Lumpur, Malaysia.
- Prabdhan, M, Taylor, F, Agrawal, S, Ebrahim,
   S. Food acquisition and intra-household consumption patterns: a study of low

and middle income urban households in Delhi, India. In: 10th Conference of Indian Association for Social Sciences and Health (IASSH); 2012, 21st-23rd November; New Delhi, India.

- 52. **Prabhakaran, D.** Review of salt and health: Situation in South-East Asia Region. In: Expert Meeting on Population Sodium Reduction Strategies for Prevention and Control of Noncommunicable Diseases in the South-East Asia Region; 2012, 11th-13th December; New Delhi, India.
- 53. Prabhakaran, P, Kondal, D, Kinra, S, Radhakrishna, KV, Reddy, KS, Ben-Shlomo, Y, Smith, GD. Intergenerational associations between parental height and cardiovascular disease risk in the offspring –findings from the Andhra Pradesh Children and Parents Study (APCAPS). In: DOHaD Satellite Symposium; 2012, 06th-07th December; Rotterdam, The Netherlands.
- 54. Raj, SS, Sahoo, PK, Chauhan, K, Manthri, S. Improved access to safe blood must be prioritized as a core component of comprehensive efforts to provide safe deliveries and prevent maternal deaths. In: 2nd Global Symposium on Health Systems Research; 2012, 31st October-03rd November; Beijing, People's Republic of China.
- 55. Raman, VR, Sheikh, K, Saligram, P, Verma, N, Sharma, N. Governance 'tool kits' for universal health coverage in India: Guidelines for implementing the expert group's recommendations. In: 2nd National Conference on Bringing Evidence into Public Health Policy; 2012, 05th-06th October; Bengaluru, india.
- 56. **Rao, KD.** How to attract health workers to rural areas? Findings from a discrete choice

experiment in India. In: 2nd National Conference on Bringing Evidence into Public Health Policy; 2012, 05th-06th October; Bengaluru, India.

- 57. **Reddy, H.** Priority setting of a state for maternal, child health and nutrition interventions/investment using multi criteria decision analysis. In: 10th Conference of Indian Association for Social Sciences and Health (IASSH); 2012, 21st-23rd November; New Delhi, India.
- Reddy, H, Vellakkal, S, Chandran, A. Outof-pocket-expenditure for family on normal vaginal and caesarean-section deliveries and influence of Janani Suraksha Yojana program on delivery associated borrowings in the states/union territories of India. In: APA 2nd conference; 2012, 26th-29th August; Bangkok, Thailand.
- 59. **Rout, SK, Kumar, R.** Health cost study on tobacco use. In: National Consultation on Economics of Tobacco; 2012, 20th-21st December; New Delhi, India.
- 60. **Rout, SK, Kumar, R, Srivastava, S.** Tobacco taxation in India. In: National Consultation on Economics of Tobacco; 2012, 20th-21st December; New Delhi, India.
- Sawleshwarkar, S, Caldwell, M, Singh, A, Mpofu, E, Zodpey, SP, Mindel, A, Hillman, RJ. Building international capacity in STIs and HIV – An innovative model. In: The International Union against Sexually Transmitted Infections (IUSTI) conference; 2012, 15th-17th October; Melbourne, Australia.
- 62. Seshadri, T, **Trivedi, M, Saxena, D,** Soors, W, Criel, B, Devadasan, N. Impact of RSBY on enrolled households: Lessons from Gujarat. In: 2nd National Conference on bringing

Evidence into Public Health Policy; 2012, 05th-6th October; Bengaluru, India.

- 63. **Sheikh, K.** Using evidence to facilitate community participation in planning for universal health coverage in India. In: 2nd Global Symposium on Health Systems Research; 2012, 31st October-03rd November; Beijing, People's Republic of China.
- Sheikh, K. Analyzing power in health systems: The case of medical dominance in India. In: 2nd National Conference on bringing Evidence into Public Health Policy; 2012, 05th-06th October; Bengaluru, India.
- 65. **Sheikh, K, Raman, V, Mayra, K.** Nurturing nursing in India: Need for governance reform. In: 2nd National Conference on Bringing Evidence into Public Health Policy; 2012, 05th-06th October; Bengaluru, India.
- 66. Singh, A. Road safety Behavioural management and policy issue. In: International Conference on Safety – Promoting a Culture of Safety; 2012, 12th-13th October; Gandhinagar, Gujarat.
- Singh, PV, Tatambhotla, A, Kalvakuntla, R, Chokshi, M. Strengthening public drug procurement systems: A comparative study of five Indian states. In: 2nd Global Symposium on Health Systems Research; 2012, 31st October-03rd November; Beijing, People's Republic of China.
- Taylor, F, Prabdhan, M, Satija, A, Ebrahim,
   S. Trends in the availability, costs and affordability of a healthy food basket in

New Delhi. In: 10th Conference of Indian Association for Social Sciences and Health (IASSH); 2012, 21st-23rd November; New Delhi, India.

- 69. **Tetali, S.** Blood bonds? A qualitative study of how people arrange blood for their relatives in Kerala, India. In: 1st Singapore International Public Health Conference; 2012, 01st-02nd October; Singapore.
- 70. **Tetali, S.** Transportation and health: Urgent need for collaboration. In: International conference on Transportation Planning and Implementation Methodologies for Developing Countries; 2012, 12th-14th December; Mumbai, India.
- Tetali, S, Lakshmi, JK. Leveraging the position of healthcare professionals for road safety advocacy. In: 1st Singapore International Public Health Conference; 2012, 01st-02nd October; Singapore.
- 72. **Tetali, S, Lakshmi, JK.** Are Indian roads safe? Perspectives of road users and administrators. In: 18th Qualitative Health Research (QHR) Conference; 2012, 23rd-25th October; Montreal, Canada.
- 73. **Tetali, S, Lakshmi, JK.** Ageing and urban mobility: How do the senior citizens in Hyderabad, India, get around? In: 3rd International Conference on Urban Mobility; 2012, 07th-08th December; Surabaya, Indonesia.
- 74. **Tetali, S, Lakshmi, JK,** Gupta, S, Gururaj, G, Hyder, A. Collecting road traffic injury (RTI) data: Barriers and enablers experienced

by research personnel. In: 11th World Conference on Injury Prevention and Safety Promotion; 2012, 01st-04th October; Wellington, New Zealand.

- 75. **Thakur, CP.** Study on assessment of food safety and hygiene practices among street food vendors in Delhi, India. In: 34th Annual Conference of Indian Association for Study of Population; 2012, 13th-15th December; Pune, India.
- 76. Venkataramanan, V, Kakkar, M, Abbas, SS. Community and health system perceptions influencing Japanese encephalitis transmission in an endemic region. In: 4th Biennial Conference of the International Association for Ecology and Health: Sustaining Ecosystems, Supporting Health (EcoHealth); 2012, 15th-18th October; Kunming, People's Republic of China.
- 77. Venkataramanan, V, Kakkar, M, Abbas, SS. An Ecohealth approach to understanding Japanese encephalitis transmission in an epidemic-prone Indian district. In: 4th Biennial Conference of the International Association for Ecology and Health: Sustaining Ecosystems, Supporting Health (EcoHealth); 2012, 15th-18th October; Kunming, People's Republic of China.
- Wadhwaniya, S, Gupta, S, Tetali, S, Lakshmi, JK, Hyder, A. Validity of selfreported helmet-use among motorcyclists in India. In: 11th World Conference on Injury Prevention and Safety Promotion; 2012, 01st-04th October; Wellington, New Zealand.

Books and Book Chapters

5.

3.

## Jan – Aug 2013

- Agrawal, S. Active and Passive Elimination of Girl Child. New Delhi, India: Axis Books Private Limited; 2013.
- Gupta, V, Ebrahim, S. Genomics of Chronic Obstructive Pulmonary Disease. In: Vijayan, VK, editor. World Clinics Pulmonology and Critical Care Medicine. New Delhi, India: Jaypee Brothers Medical Publishers; 2013.
- Mohan, S, Reddy, KS. Health Transition and the Rising Threat of Chronic Noncommunicable Diseases in India. In: Lewis, MJ, MacPherson, KL, editors. Health Transitions and the Double Disease Burden in Asia and the Pacific: Histories

## Aug - Dec 2012

- Agrawal, S. Health and Nutritional Disadvantage Among Tribal Women and Children of Orissa: An Enquiry. In: Somayajulu, UV, Panda, GK, Kar, R, Mishra, P, Singh, KK, editors. Population, Reproductive and Child Health: Perspectives and Challenges. New Delhi, India: Serial Publications; 2012. p.317-36.
- Avan, B, Gautham, M, Bhattacharyya, S, Srivastava, A. Data Informed Platform for Health, Feasibility Study, Uttar Pradesh. London, United Kingdom: London School of Hygiene and Tropical Medicine 2012.

of Responses to Non-Communicable and Communicable Diseases. New York, United States of America: Routledge; 2013. p.76-91.

- Nakkeeran, N. Integration of Traditional Systems of Medicine with Modern Health System at the Primary Health Centre Level.
  In: Siva, R, editor. Primary Health Care in India: Status, Challenges and Prospects.
  Delhi, India: B.R. Publications; 2013.
- Panda, R, Pathak, G. Reforms in Health Sector Regulation: Way Forward for Achieving Universal Health Coverage. In: Aijaz, R, editor. Public Health Concerns and Reforms: Perceptions of the Civil Society. New Delhi: Academic Foundation; 2013. p.17-247.
- Stigler, MH, Medina, J, Arora, M, Nazar, GP, Rodrigues, LM, Reddy, KS, Perry, CL. Adolescents' response to food marketing in Delhi, India. In: Williams, JD, Pasch, KE, Collins, CA, editors. Advances in Communication Research to Reduce Childhood Obesity. New Delhi: Springer Science+Business Media; 2013. p.269-84.
- Vidyasagar, D, Daruru, R. Global view of neonatal care. In: Mathew, O, editor. Inside Health Care: ICU care of neonate Who decides? Who pays? Who can afford? . Bantham Science Published: New York, United States of America; 2013. p.3-17.

- **Dey, S.** Urban-Rural Differences of Female Cancers in Gharbiah, Egypt: Hormonal Conundrums of Exposure and Effect in Local and Global Environments. Paperback ed. Saarbrücken, Germany: LAP Lambert Academic Publishing; 2012.
- Dey, S, Nambiar, D, Lakshmi, JK, Sheikh, K, Reddy, KS. Health of the Elderly in India: Challenges of Access and Affordability. In: Smith, JP, Majumdar, M, editors. Aging in Asia: Findings from new and emerging data initiatives. Washinton D C, United States of

America: The National Academies Press; 2012. p.371-86.

5.

- Gilson, L, Bennett, S, Hanson, K, Kielmann, K, Orgill, M, Schneider, H, Agyepong, I,
  Sheikh, K, Ssengooba, F. Doing Health
  Policy and Systems Research: Key Steps in
  the Process. In: Gilson, L, editor. Health
  Policy and Systems Research: Methodology
  Reader. Geneva, Switzerland: World Health
  Organization; 2012. p.41-60.
- Gupta, I, Trivedi, M, Rudra, S, Joe, W, Peter, B, Subbiah, R. Implications and Feasibility

9.



of Commercial Health Insurance for People Living with HIV in India. In: Narain, JP, editor. Three Decades of HIV/AIDS in Asia. Hardcover ed. London, United Kingdom: Sage Publications Pvt. Ltd; 2012. p.450-66.

- Kahol, K. Securing Funding for Simulation Centers and Research. In: Levine, AI, DeMaria, S, Schwartz, AD, Sim, A, editors. The Comprehensive Textbook of Healthcare Simulation. New York, United States of America: Springer-Verlag; 2012. p.715.
- Mavalankar, DV, Raman, PS. Health Systems. In: Hussein, J, McCaw-Binns, A, Webber, R, editors. Maternal and Perinatal Health in Developing Countries. Oxfordshire, United Kingdom: CAB International; 2012. p.64-76.
  - Metcalfe, M, **Saha, S**, Rao, DSK, Stack, K, Awimbo, A. Integrated Health and Microfinance in India: Harnessing the Strengths of Two Sectors to Improve Health and Alleviate Poverty. Gandhinagar, India: Freedom From Hunger, Indian Institute of Public Health Gandhinagar, and Microcredit Summit Campaign; 2012.
- Murali Prasad, MR. Different Types of File Formats of E-Resources. In: Ramaiah, LS, Veeranjaneyulu, K, Sujatha, G, editors. Next Generation Librarianship: Strategies for Change Management. Hyderabad, India: B S Publication; 2012. p.145-57.

- Murthy, GVS. Community Ophthalmology. In: Chaudhuri, Z, Vanathi, M, editors. Postgraduate Ophthalmology. New Delhi, India: Jaypee Brothers Medical Publishers; 2012. p.3-17.
- Murthy, GVS, Johnson, G. Prevalence, Incidence and Distribution of Visual Impairment. In: Johnson, GJ, Minassian, DC, Weale, RA, West, SK, editors. The Epidemiology of Eye Disease. London, United Kingdom: Imperial College Press; 2012. p.3-61.
- Murthy, GVS, Thippaiah, A, Singh, S, Sulgodu, S, Shukla, R. Maternal Death Review in Andhra Pradesh: Standard Operating Procedures. Hyderabad, India: Indian Institute of Public Health; 2012.
- 14. **Narayan, K, Kar, S,** Gupta, N. From 'Paramedics' to 'Allied Health Professionals': Landscaping the Journey and Way Forward. New Delhi, India: Public Health Foundation of India; 2012.
- Phoya, A, Mavalankar, DV, Raman, PS, Hussein, J. Improving the Availability of Services. In: Hussein, J, McCaw-Binns, A, Webber, R, editors. Maternal and Perinatal Health in Developing Countries. Oxfordshire, United Kingdom: CAB International; 2012. p.127-38.
- 16. Ross, DR, Weller, I, Hakim, J, **Hira, S,** (Guest editor). Evidence for action: What should be

in the basic packages of HIV treatment and care services in low and middle-income countries? Avenel, United States of America: AIDS: Lippincott Williams & Wilkins; 2012.

- Sastry, UVKV, Chandran, AS, Somayajulu, UV. Optimizing NRHM Impact on Child Health Outcomes in Disadvantaged Groups of India. In: Somayajulu, UV, Panda, GK, Kar, R, Mishra, P, Singh, KK, editors. Population, Reproductive and Child Health: Perspectives and Challenges. New Delhi, India: Serials Publications; 2012. p.288-316.
- Singh, A, Zodpey, SP, Gaidhane, AM, Zahiruddin, QS. Strengthening Health Systems to Address Child Health. In: Merrick, J, editor. Child Health and Human Development Yearbook 2012. Jerusalem, Israel: Nova Publishers; 2012.

## Publications at a Glance



The research conducted at PHFI has resulted in several scientific and policy related publications, many in high impact journals.

- Average Impact Factor of all publications between October 2007- till October 2013 = 5.3
- Average Impact Factor of publications between August 2012 August 2013 = 6.2







Let us more and more insist on raising funds of love, of kindness, of understanding, of peace.

Mother Teresa

## Financials CORPUS AND SPECIFIED FUNDS

PHFI has received funding, as corpus and specified funds, from supporters including central and state governments, foundations, private sector and individual philanthropists. We are deeply appreciative of their support. The total corpus funds received by PHFI since inception till March 31, 2013, are INR 100 Crores, and Specified Funds are INR 119 Crores. Amongst the core supporters, Government of India has provided INR 65 Crores (part of Corpus Funds), and balance INR 154 Crores are from Foundations (INR 110.5 crore, of which INR 69.22 Crore is from the Bill & Melinda Gates Foundation) and Private Sector & individual philanthropists (INR 43.5 Crore). The closing position of funds for the financial year 2012-13 was: Corpus Funds at INR 100 Crores; Specified Funds at INR 82 Crore.

The source wise details are mentioned in the table below: (Cumulative from inception till March 31, 2013)

Source	INR (Crores)
Government of India, Ministry of Health & Family Welfare	65.00
Bill & Melinda Gates Foundation	69.22
Nand & Jeet Khemka Foundation	19.86
HCL Corporation	10.00
AKM Systems Pvt. Ltd.	10.00
Rohini Nilekani	10.00
Amar Foundation	9.08
Reliance Industries	6.00
Ranbaxy Promoter Group	5.00
Friends of ISB Foundation	4.96
Give2Asia/Deshpande Foundation	2.54
Spandana Foundation	2.50
American India Foundation	2.34
GVK Power and Infrastructure Limited	1.25
GMR Projects Private Limited	1.25
TOTAL	219.00

### PROJECT FUNDS (Cumulative from inception till March 31, 2013)

The total funds received for projects/grants from inception till March 31, 2013 are INR 325.19 Crores. Of this, INR 82.34 was received in 2012-13. The source wise details (broad categories) are as follows in the table below:

Source/Category	INR, ₹ Cr
Not-for profit organizations and foundations	187.65
Government (Indian & foreign), associated agencies, bilateral and multilaterals	59.63
Academic & research institutions	36.73
Corporates & their foundations	39.84
Others	1.54
TOTAL	325.39

**Acknowledgements**: We would like to acknowledge the invaluable support of the following individuals and organizations, who have contributed during the year 2012-13 to PHFI.

**MMTC India Ltd** for establishing scholarship program for meritorious students belonging to socially and economically deprived communities pursuing the Post Graduate Diploma in Public Health Management (PGDPHM) offered by IIPH.

**Dr. Mangal Katikineni, Dr. Anil Tulpule and Dr. M. K. Mohan** for supporting an endowment fund for students of Public Health Nutrition in the honour of Dr. P.G Tulpule, former Director of National Institute of Nutrition, Hyderabad.

**STC of India Ltd** for setting up a Fellowship Fund to foster tobacco prevention and control and improve health outcomes among women and children in Barabanki district, Uttar Pradesh.

Mr. Hari Bugganna and Binani Cement Ltd for their contribution towards the PHFI Research fund.

### BSR&Co.

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Independent Auditor's Report

To the Members of the Generating Council of

Public Boath Foundation of India

### Report on Financial Statements

We have audited the accompanying financial statements of Public Health Youndation of India (the Foundation) which comprise the Balance Sheet as at 31 March 2013 and the houseste and Expenditure Account for the year then ended and a summary of significant accounting policies and other explanatory information.

### Management's Responsibility for the Financial Statements

Management is responsible for the preparation of these fluxuated statements that give a true and fair view of the fluxuated position, fluxuated performance of the Foundation in secondance with the Accessming Standards issued by Institute of Chartered Accountants of India. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation and presentation of the financial statements that give a true and fair sizes and are free from material minimatement, whether due to finand or pres.

### Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements hand on our andit. We conducted our andit in accordance with the Standards on Auditing issued by the Indiana of Charteral Accountants of India. These Standards respire that we comply with ethical requirements and plas and perform the sadit to obtain reasonable assesses about whether the Transial statements are free finan material ministatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statuments. The procedures selected depend on the auditor's judgment, including the assessment of the tisks of material initializement of the financial statements, whether due to Finalize every. In making these risk measurements, the auditor considers internal control relevant to the Finalizement and this promination of the financial statement is order to design such procedures that are appropriate in the situationization. An audit also includes evaluating the appropriatement of accounting policies used and the reasonablencies of the financial material existing the appropriatement of accounting policies used and the reasonablencies of the financial materiants.

We helieve that the pullt evidence we have obtained is sufficient and appropriate to provide a basic for our audit opinion.

### Opinion

In our opinion and to the best of our information and according to the explanations given to us, the financial statements give a true and fair view in conformity with the accounting principles generally accepted in India:

(i) in the case of the Balance Sheet, of the state of affairs of the Foundation as at 31 March 2013;and

(ii) in the case of the Income and Expenditure Account, of the excess of expenditure over income for the year ended on that date.

### Report on Other Legal and Regulatory Requirements

- 1. We further report that:
  - we have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of our audit;
  - (ii) in our opinion, proper books of account as required by law have been kept by the Foundation so far as appears from our examination of those books; and
  - (iii) the Balance Sheet, the Income and Expenditure Account dealt with by this Report are in agreement with the books of account.

For B S R & Co. Chartered Accountants Firm Registration No.: 101248W

Vikram Advani Partner Membership No.: 091765

Place: Gurgaon Date: 25 September 2013

#### Painty Health Econolation of Irelia Hubsair Short at at \$14 March 2013. (All seconds ins in Report)

	Schudzler	An est At Mineria Smith	Arrest At March 2011
Institut of Facility			
Corpore from			
New Work Land	1	818.776.812	1012.040.047
Propert Reeds hold in trees		961204,510	10006401
Capital search band		121.151.346	106,822,653
farmed bad		04.001,017	64300,017
Face		LINETHLAST	ANNUAL PROPERTY.
Application of Family.			
Phase and the			
Cine Mark	+	103,173,810	100,788,899
Lass Automobilitati depreciantes		(117, 74, 609)	194,942,821)
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Cited and have being and		2,008,000,070	Exit_TITLEF.
Louis and advances		364,320,536	213,468,890
Obel period amin		71,161,840	13.000,000
		21021,304,640	Lookawi Jul
Leve Corrow Babilities and provisions	1		100 B 100 B
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Participa		[34,681,848]	0.006360
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Milling Vibrani Advant Partner Hadroldy No. (1975)



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**Prof. K. Scinath Reddy** Pendint

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### Public Boattle Foundation of India Income and Expenditure Account for the year raded at 21st March 2013 EAB assessments and in Reports

	Schellule:	File the scan ranked 38 March 2043	For the year ended
Territory .		The rest of the second	
Gauge basing the state of the second state of		1,042,645,798	756,302,435
Add. Grant transitional from Specified Facel (to the senses of argument incorred)		161,713,148	45,345,941
		120,000	HOL 451,377.
Instant Instance	÷.	133,140,900	105,963,211
For Some Addresses		+4,942,011	45,347,448
Other meaning		4,002,779	2,996,192
114 March 144			\$21,368
		0.00.70.698	953,788,335
Execution			
Personal sugment	10	102,318,325	98,894,176
Program expenditure (Includes out-grant expension of Wo.311,MiR,734(provines your Wo.227,345,114))		6,100(0090,120	821,135,299
Administrative sequence	11	161,333,944	1000,400,000
Expressive Sectors depreciations during the year	1.0	LINCHLAN	HILHLIN .
The second se		32.636.565	34,814,861
Total expression during the proof		1,49,418,368	EADALTIA, No.
(Defaith) services for the year		(32,836,965)	(64,435,633)
Depresiation transferred to Copiled assets ford		17,836,568	26,474,567
(Defail) ( simplex transformat to General fand			(34,941,134)
Next Read accounting and the and antes to the accounts			

The schedules relieved to share liver an integral part of the income and Expenditure Account.

As per out report of even date attached

for BERACE. Chartened Accountains Film registration No. 191345W

Witness Adds

Partiest Mandarship No. (012965

The Organis September 2013



Fire part and balled of Public Bealth Foundation of India

Ford, K. Scingth Roddy President

UNDEWMAN And Chaterrell. Head Fammer

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STATISTICS.	At March 2011	The Weersh 2017
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Tipong Ukan	007.003.000	10,79,000
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متدوع والمتحد		
Paramag below	1010.040.007	384,215,86
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- Second House Class designed diversion in the administrative of the second sec	31,54,548	11,000,017 05,790,000
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Transferred to cannot have been	(01.752.211)	441,006,000
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		CHILDINGS!
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Figure includes	116,000,722	12,406,239
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Long and the second second second		
Revise repulled	10.054.090.054	(77).000.000
Cight operation	101,745,2485	101,017,468
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Reights transferred to Transmit Frank	(8.279.634)	63,01,78
Child official and the second second	11,036,0436	00.00380
	64,944,16	*1C2/02/10
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Schular - 1 - 1 (spin) much from		
Charles Interne	104,002,014	10,000,000
Transformed Room particular States	BARGBARK	87 mail 110
Disardientil Done gesilleri Danile	48.781.788	
Transferred from project lands	01201346	14,010,000
Depression for the part	(12,454,346)	40.000
And Advanced Statistics in the		644,002,455
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Spong billion	souther the	Jun and Date
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	a and a second	ALCONT. ALC
(g(summers)))	A	
	K had the	
The State	and and a second se	

## Public Houth Evendation of India Schedules forming part of the financial statements (All amounts are in Report)

	An at	ACH
	38 March 2983	Ji March 3933
Schedule T / Corrent asiats, basis and advances		
Each and bank holonyys		
Cash in hand	25,326	378,321
Cheques in hand	4,974,446	1,713,990
Balances with scheduled hanks	and the second second	Same Sec.
- In correct accounts	43,388,743	58,349,608
- Minerings accounts	52,162,480	48,461,952
<ul> <li>in Apoint accounts</li> </ul>	2.188,051,073	1,711,875,616
4	2,488,690,078	1301,115,087
Leases and advances (Discovered and considered good)		
A description of the local distribution for other as for each of the	0.075 076	49 118 117
Serveria deservata	44 674 618	28,064,438
Bulk stand white and	64 730 110	10.736638
Advance test	47,971,465	21.021.400
Citaria forsy and other merrivable	101,229,965	18.029.036
Prepaid exercise	3,685,913	4,403,307
College of States	361,328,730	213,061,196
Other current and		
Internet successf but set due:	28,385,849	73,896,083
	15,85,849	73,8%,985
Schedule 8 : Corrent Robilities and previolence		
Current Babilities		10.000 A.M.M.M.
Sandry anothers	165,739,992	. E295,024,2004
Alvance meinheil	9,027,436	
Obet Subilities	31,632,783	8.078,797
	386,480,231	67,00,90
Proching		
Tankala	15.447.067	9,813,221
Constructed discourses	11,154,183	6.411.041
	26.621.634	15,924,311
		Contractive States



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		Condition				<ul> <li>Remaining D</li> </ul>	and the local division of the		- fact	line in the second s
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Coupling The Council of										
and the second second	5368	CT-40	1	107000	-	10724		1.0.0	-	100
Depart	0.4587	1.027524	- 4.50	4.74.25	2000.000	1050.000	20,04	1.0.00.07	104700	104/00
Charles and Parks	8154,860	1000	5 (C. 16)	10.00000	1221.04	147,60		1000.00	20,9629	2000
Contract Name	10.07	104.00	and the second	1000.01	10000	1.776.00	1.00	1000	107.00	1000
luter.	400.20			40000	200343	104(0)		1276.04	129,042	100000
Natur Talance	100.00	120.00	1 . m	A Rentered	29:26	144.407		1.122(14)	12,903	Address of
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lifest .	196,472	1000		0004	107-081	240.00		107220	4,000	2000
Lorenza and Lorenza an	1429-040	1000	4.50	100,752,635	NUMBER OF	100.00	2.04	10000000	47,573,88	1.71.00
heim fit	1107138	3,36,56	100	100,000,000	40.00	31,55,50	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Notices (	10 M 10 M 10	
Calific and Department - 1	403,08	63636		1000044	5 U.				110,0946	400.08

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### Public Health Translation of India Schedules Sarming part of the Second distribution

(All answers are in Report)

	For the year coded 31 March 2013	For the year unded 36 March 2013
Schedule 9 : Interest Income		
Internet excellent from various hard, accounts	3,715,942	8,248,955
Internet completed on Income tex Reflect		281,593
Induced a conclused lines fixed depends accounts	211,015,001	316, 162, 758
	224,098,099	343,443,194
1 mil		
- Internet income on designated investments transferred to project funds	(33,696,131)	(164,186,1623
- Internet income on decignated investments from listed to specifical fields	(33,346,948)	(11,003,117)
	113,043,988	105,343,715
Schedule III : Personnel expresses		
Advice and elements that of second Ry 50, 501 (B) (second on Ry 51, 50, 701)	10.271.500	30,429,211
Contribution to extend on a other firsts	13,946,729	8,324,463
	101,316,331	INCHANTS.
Schebale 13.). Administrative expenditions		
Pater Bady exercise	12,336,578	10,015,905
Anna Visual of Sciencesty Ro. 18, 814, 345 (pressions) near Ro. 5, 823, 58931	84,406,998	39,523,691
	5,136,863	4,176,331
Trend and conversions:	9,646,206	7,691,008
Rectainable expenses	6,123	
Commutication (and of successive its 2 mill 173 (previous new its 2 AU.MIS)	- 5,864,499	3,428,383
Bandas and particulicals.	648,283	365,681
Reports and maintenance((not of encoury Ro. \$35,408 (persing pair Ro. 430,3541)	1,866,133	1,323,400
Conditionaria, combasta and other program expressio	4,696,933	9,259,276
Electricity and water (that of research Ro. 1,721,293 (pervises year Ro. 1,128,763))	3,226,468	3,867,549
Not the	3,514,743	1,516,133
These aspenses	3,5%6,832	3,877,992
Guest house expension	3,993,674	1,091,409
10ffice expension	11,990,294	1,815,941
Printing and stationery	1.301,630	1,170,029
Compliantiant and berliatingst	1,467,413	
Rates and terms	1,001,100	1.96.301
Minardianeous expenses ((not of receivery Ba.)s8,537 (previous year 9a.10.771))	1,482,494	1,145,218
	101.055,044	100,407,870



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### Schedule 12 - Significant accounting policies and notes to accounts

### A Background

Public Health Foundation of India ("PHFF?" "he Foundation") was registered under the Sociation Registration Act, 1860 vide registration certificate number 54840 dated 8 February 2006.

The Frandation has been granted an ecception order section U2A of the become Tax Aut, 1961, vike letter member D(T)(F)/12A/2005-06/9-104400/3113 dated 10 June 2006. The Frandition flux also obtained exception u/s 800(20)(vi) of the Income Tax Aut, 1961 vide order tumber D(T)(E) 2008-09/ P-1044/1073 dated 26 June 2008 for the period from 1 April 2008 to 31 March 2011. The above exception order section 8005 (5)(vi) of the Income Tax Aut, 1961 has been extended from the period 1 April2011 till it is rescinded vide order tumber D(T)(E) 2011-12/ P-104W3102 dated 05 December 3011.

The Foundation has been registered under the Foreign Contribution (Regulation) Act, 1976 for carrying out activities of social nature with registration master 231660927 dated 26 September 2008.

The Foundation has been registered as a Scientific and Industrial Research Organisation (SIRO) by the Department of Scientific and Industrial Research under the Scheme on Recognition of Scientific and Industrial Research Organisations (SIROs), 1988 Vide No. 14/482/2008-TU-V dated 23<sup>rd</sup> April, 2011 for the period from 1 April 2011 to 31 March 2014.

The main object of the Foundation is to redress the finited institutional capacity in India for strengthening training, research and policy development in the area of Public Health, PHF1 focuses on broad dimensions of public health that encompass preventive and therapeutic services.

### IL Significant accounting policies

### () Basis of Accounting

These financial statements have been prepared and presented under the historical cost, conversion method on the accrual basis of accounting and in accordance with the Accounting Standarth issued by the Institute of Chartered Accountants of Irelia and other generally accepted accounting principles and practices prevailing (Indian GAAP) in India, as applied consistently by PUIT.



### ii) Use of estimates

The preparation of financial statements in configurity with Italian GAAP requires management to make estimates and assumptions that effect the reported amounts of assets and liabilities, disclosure of covingent assets and liabilities at the doss of the financial statements. Actual results could differ from those estimates. Any revision to accounting estimates is recognized prospectively. Contingencies are recorded when it is probable that a liability will be incurred, and the amount can be teasonably estimated.

### (ii) Fixed assets and depreciation

### Fixed assets

Fixed assets are stated at cost of acquisition including tasas, duties, bright and other incidental expenses relating to acquisition and installation.

### Capital work in progress

Cent of much not realy for use before balance shoet date and any advances paid towards acquisition of fixed much are disclosed as capital work in progress.

Amonto purchased from Specified Funds and Project Funds are charged to the Specified Fund and Project Funds respectively and transformed to Capital Assets Fund. Payment of advances for capital expenditure and amount spent on capital work in progress out of the specified funds and project funds are also charged to the respective funds and transformed to capital must find.

### Depreciation

Depreciation on fixed musts is charged on the Straight Line method, at the fullowing

Computer and Software	33.39%
Office enginements	20%
Pure-liste and flatures	14,29%
Vehicles	14,29%
Modical expigment	20%

Lesschold improvements are amortised over the lease term or their useful life.

Assets conting loss than 85. 5,000 per unit are depreciated at the rate of 100% per arream. Depreciation is charged on a pro-rata basis for assets purchased/solid during the year.

Depreciation charged on faced assets purchased from Specified Fuends and Preject Funds is sumafiered to the Capital Assets Fund.



#### fes forestimente

Investments are classified into long-inter investments and current investments, beaud on intent of memorynean at the tarus of multing the investments, becements, benedict on be build for some there one pose, are classified as long-inter investments, currentlist or be subset at here a dissination in value, which is other these temperatures are valued at several investments in value is dissination in value, which is other these temperates on valued at several metric there is dissination in value, which is other these temperates on enters. Dissination is value of investments is considered other than temperates here there is dissination in value of a second to be a second to be an enter the temperates and the formation of the method deliver and the financial health of and specific prospects for the temperaty in fully provided for and temperates the reflected as a provision for dependential in tenter them temperates in fully provided for and temperatures.

#### () Famiga correct:

Foreign surrowsy transactions are recorded at the exchange rates prevailing on the data of the respective transactions. Realised gales and houses on foreign converse transactions charing the year are recorposed in the focuses and Expenditure Account. Monitory foreign correspondences and labelities remaining anostelled at the Balance Short data are remained at year red rates and evolution gales. J house on floreign correspondences the set transpised in the focuses and Expenditure Account.

#### vit Retirement benefits

All amployee bandlis payable/available within twelve menths of rendering the service are classified as short-term employee bandlin. Henefits such as solarine, wages and banas, etc are recognised in the became and Expenditory Account is the period in which the employee renders the telated service.

Defined contribution place. The Foundation's amplicator provident final achieve is a defined contribution place. A defined contribution plan is a post-employment benefit plan tooler which or only pays flued acontributions and will have no obligation to pay forther amounts. Obligations for contributions to defined contribution place our recognized as an configure bracelle expense in the luminous and Expanditure Account in the year where the considerer readers the related service.

Defined benefit plane. The Franklation's graticity plan is a defined benefit plan. The present salas of gatatily obligation tasks each defined benefit plan is determined based on an asturated subartic particle in the anti-hyperbolic actuary using the Projected Unit Could Method, which receptions each period of carrows and period at the present of the projected Data to the final obligation. The obligation is research and measured at the present value of the extension of the contensated force cash period of the contensated force and period of the contensated force and the present value of the contensated force and the present value of the contensated force and the obligation and reconstruction and the present value of the contensated force and the obligation and the obligation of the section of the section



Paldie Health Franslation of Italia Schedules forming part of the scenasts Off annumb are in report

> related obligations. Actuarial gains and knows are mengitised immultatuly in the focome and Expenditure Account.

> Compressing advectors are in the nature of other long term employee henefits. The Gability in respect of compressing absences is previded on the basis of an actuarial valuation done by an independent actuary at the year end. Actuarial gains and linnes are recognized isomediately in the income and Exponditure Account.

> Gains or losses on the cartalineet or settlement of any defined benefit plan are recognised when the cartalineet or settlement occurs.

rill Paula

Corpor Fand. "Corpor has?" relates to funds contributed by the founder members at incorporation and donations received with specific directions that they shall firm put of the corpor of the Foundation.

Specified Fault "Specified Faulth" are restricted faulth received for specified purpose of Accelepancet of Indian Institute of Public Health and for premotion of public builth preservation. These are held in trust until tood for the purpose specified and deposite i institutions are servative approximations. Revenue from the restricted fault is recognized during the year in the bosons and Expenditore Accesses to search the related expectifient. The balance amount is curried forward in the restricted fault for som in faunt periods, Income arising out of the insectaments in this regard is conflict to the flow and is used for the purpose specified in this regard other than for acquisition of flow and which is transformed by the curried other flux.

Capital Annets Fand: "Capital Annets Fard" represents capital annets purchased out of specifical restricted fands and is represented by the out book value of such fanded fixed sects.

Project Fand: "Project Fands" are grants received from various finding agencies to tatty out specific activities. These are hold in trust antil used for the purpose specified and deposits / investments are somewheld against them. Reverses from the respicted fand is recognized charing the year in the lossness and Expenditure Assesses to namely the related expenditure (including copilal expenditory). The balance amount to carried forward is the restricted fand for use in future periods.

General Funds: The Foundation also receives "General Funds" which are unroutricted in nature: The excess of income over expenditure during the year, being general purpose in nature is carried forward for our in Patare periods.

villi Laures

Launa persuants sealer an operating lease are recordinist as an expense in the become and Expenditure Account on a straight line basis over the lease term.



### C. Expenditury

The Foundation implements its programmers for strengthening training, research and policy development in the area of public health through projects conducted by itself or by other partner organizations to which it disburses grants. Accordingly, "Program expendition" includes expenditure incurred by partner organizations till the year end. Balance unspent amount of grant with partner organizations at year and has been shown as "Sub – grant advance" under the head learn and advances.

 "Project Funds held in trust" represent the assexpended portion of furth received from various dosers.

E. In the previous years, PHFI had entered into a Menseendum of Understanding (MOU) with State Government of Andhra Pradesh on 7th April 2007 to jointly set up Public Health organisation in the state. Accordingly, Indian Institute of Public Health, Hydrabad ("HPH, 11) was farmed as a registered Society with The Office of the Registrar of Societies, Ranga Reddy District, Hydrabad vide certificate of Registration no. 3126 of 2007.

During the previous year, Governing Council of IPULI in its meeting held on 17 October 2011 has passed a special resolution to dissolve the society.

Parnaunt to the order of Registrar of Societion vide Merror No. 4300/societies/2011 dated 12 January 2012 11PH,H has been dissolved and halance sheet of 11PH, H as on the date of dissolution was merged with Public Health Foundations of India on the following basic-

- the assets and itabilities of IIPH,H on the date of dissolution as per the assilted flowercial statements on that date was recorded by the PHFI at their respective book value.
- The aggregate of due not assets of IDPL/I as on the date dissolution date (Rs. 18,195,350) was added to the specified fands. The following is the breakup of not assets of IDPL, II as at 12 January 2012.

Assets	Balances as at 12 January 2012
Net fixed month	2.021,5%
Capital work in progress	5,812,167
Net current murits	10,356,587
duit terroot to a transfer of the	18,195,158



### F. Auditors' remonstration\*

	For the year ended 31 March 2013	For the year ended 31 March 2012
For statutory audit	9,00,000	\$50,000
For other tax related services	50,000	70,000

\*cooluding service tax

- 62. PHFI had accumulated an around of DOR 823,991,002 for the Assessment. Year 2007-08 to be utilized by 31 March 2013 (by virtue of grace period under Santian 11(2)(c) of the Act. On accumt of an injunction order issued by the Hos/Me High Court of Andbra Pradesh as amount of INR 783,050,000 could not be applied during the period 6 March 2009 till 27 June 2011. Consequently, the time period of stillization of finds for the said amount of INR 783,050,000 would be counsided to 15 July 2015 in view of proviso to succion 11(2) of the Incomm-tax Act, 1961.
- H. Disclosure as per AS-13 (Revised 2005) "Employees Benefits" in respect of defined benefit obligations are as under:

and the best of the street states	2012-13	2011-12
Economic assumption		and the second second
Discount rate	1.00% p.a.	8.50 % p.a.
Fature salary increase	3.50 % p.a.	6.00% p.a.
Demographic assumption		
Retirement age	60.	60
Mostality table	LALM (1994-96)	LIC (1994-96)
Withdrawall rates		
Upto 30 years	3%	3%
From 21 to 44 years	2%	2%
Ahone 44 years	114	1%

The estimates of future salary increases, considered in antaarial valuation, takes into account the inflation, seniority, promotion and other relevant factors, such as supply and demand in the employment market.

### Provident field

PHF1 makes contribution to statutory provident fland in accordance with Employees Provident Fund and Miscellanessa Provision Act, 1952, This is post employment benefit and is in the nature of defined contribution plan, Contribution made by the society during the year is Rs, 13,946,725 (Previous year Ba.8,374,461).



### Public Health Foundation of India Schedules forming part of the accounts (All amounts are in rupees)

### I. Leases

PHF1 has taken office premises under operating lease arrangements. The lease rent charged to Income and Expenditure Account is Rs. 84,406,948 (Previous year Rs. 39,527,691).

 Previous year's figures have been regrouped/ recast, wherever necessary, to confirm to the current year's classification.

For B S R & Co. Chartered Accountants Firm registration No. 101248W

Vikram-Advani Portner Membership No.:091765



Place: Gurgaon Date: 255 eptember 2013

For and on behalf of Public Health Foundation of India

Prof. K.Srinath Reddy President

Place: New Delhi Date: 25 September 2017

H 19 Forder Amit Chaturvedi Head-Finance

Place: New Delhi Date: 25 Jeptember 2013

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Contact Email: contact@phfi.org / Website: www.phfi.org