



August 2018

STRENGTHENING PRIMARY HEALTH CARE IN RURAL INDIA

REPORT AND RECOMMENDATIONS
OF A NATIONAL CONSULTATION



Basic
HealthCare
Services



PUBLIC
HEALTH
FOUNDATION
OF INDIA

Kn Knowledge Integration
IT and Translational Platform
Evidence for health policy





Strengthening Primary Health Care in Rural India

The national consultation on strengthening primary healthcare in rural India was convened during the 15th World Rural Health Conference, organized by the









Academy of Family Physicians of India in association with WONCA Rural Health (World Organisation of Family Doctors). More than a thousand experts and practitioners (1044) from 40 countries participated in this international conference, held at India Habitat Centre, New Delhi from 26-29th April, 2018. The theme of this conference was “Healing the Heart of Healthcare - Leaving No One Behind”. The Honourable Vice

President of India, Mr M Venkaiah Naidu, inaugurated the conference. Mr Ashwini Kumar Choubey, Minister of State for Health and Family Welfare, Government of India, and Mr Manoj Jhalani, Mission Director of the National Health Mission (NHM) also spoke in the inaugural function. The conference culminated with the unanimous adoption of the Delhi Declaration, calling for people living in rural and isolated parts to be given a special priority if nations are to achieve universal health coverage. (www.who.int/hrh/news/2018/delhi-declaration/en/)

The National Consultation on Strengthening Primary HealthCare in Rural India was nested within the conference, hosted by Academy of Family Physicians of India, and convened by Basic Health Care Services Trust. Niti Aayog, National Health Systems Resource Center (NHSRC), Public Health Foundation of India (PHFI), Knowledge Integration and Translation Initiative (KnIT), and WONCA-Rural co-hosted the consultation. Dr Vinod Paul, Member, Niti Aayog delivered the keynote address of the consultation. A range of national and international experts participated and spoke at the consultation.

Co Hosted by:

 <hr/>  <hr/>  <hr/> 	 <hr/>  <hr/>  <hr/> 
---	---



“

I will give you a talisman. Whenever you are in doubt, or when the self becomes too much with you, apply the following test. Recall the face of the poorest and the weakest man [woman] whom you may have seen, and ask yourself, if the step you contemplate is going to be of any use to him [her]. Will he [she] gain anything by it? Will it restore him [her] to a control over his [her] own life and destiny?

”

-Mahatma Gandhi, 1948.



Contents



Executive Summary	1-3
Background	4
Setting the Stage	5-6
1. Family Physicians and primary health care in rural India : Dr Raman Kumar	
2. Policy initiatives for strengthening primary health care in rural India : Dr Rajani Ved	
Key Note Address:	7
India's Path to Universal Health Care: Dr Vinod K Paul, Member, Niti Ayog	
Global and Indian Evidence	8-10
1. What makes primary health care work in rural areas : Global Evidence: Dr Bruce Chater	
2. What makes Primary health care work: Indian evidence : Dr Rajesh Kumar	
Experiences from India	11-17
1. CMC Vellore equips doctors for rural health care : Dr Anand Zachariah	
2. Providing comprehensive health care in rural Central India : Dr Yogesh Jain	
3. Team approach to deliver health care in tribal Rajasthan : Dr Sanjana B Mohan	
4. Stated Funded Health Insurance in Karnataka and its implications for primary healthcare : Dr N Devadasan	
5. Experience of deploying mid-level health workers in rural Chattisgarh : Mr Samir Garg	
6. NRHM experience of nominating rural physicians for Family Medicine Training : Prasanth K Subrahmanian.	
7. Using technology for delivering healthcare in rural areas : Dr Sabahat Azim	
Global Experiences	18-22
1. Strengthening Healthcare in Rural Locations: Experience from Queensland, Australia : Dr Bruce Chater	
2. Restructuring primary healthcare in South Africa : Dr Ian Couper	
3. Evolution of Family Practice in Brazil and its implications for India : Dr Mayara Floss	
4. Transforming a Rural hospital and building a rural training site in Nepal : Dr Bikash Gauchan	
5. Global Evidence on effectiveness of Mid-level providers for Primary healthcare : Dr Chandrakant Lahariya	
Comments by Experts	23-26
1. Dr Rajiv Sadanadnan, Additional Chief Secretary, Government of Kerala	
2. Dr Maharaj K Bhan, Ex-Secretary, Department of Biotechnology	
3. Dr Paul Worley, Commissioner, Rural Health, Government of Australia	
4. Dr Roger Strasser, Dean, North Ontario School of Medicine, Canada	
5. Dr Preeti Kumar, Vice-President, Public Health Foundation of India	
Recommendations	27-28
List of Participants and Affiliations	29-30

Executive Summary



Background

India has made significant advances in improving health of its populations for over more than a decade, reducing the gaps between rural and urban areas, and between the rich and the poor. However, huge disparities still remain, and access to healthcare in rural areas continues to pose a significant challenge. There is a growing recognition that India needs to build a strong comprehensive primary healthcare system to accomplish any further advancements in the overall health status of its populations, and to reduce any disparities. The National Health Policy of 2016 and budgetary announcements made in 2018 (better known as the *Ayushman Bharat* scheme) have two components of strengthening healthcare in India: a) improving access and quality of primary health care through the strengthening of 150,000 sub-centers and PHCs (transforming them into health and wellness centres), and b) improving access to secondary and tertiary care through an universal health insurance scheme.

With improving infrastructure and rural access, some state governments have designed and implemented innovative solutions to address the problems of access, as well as affordability of healthcare. Many not-for-profit

organizations that work in difficult to reach rural areas have also worked on innovations to improve access, responsiveness and quality of primary healthcare. Finally, there are substantial, long-term experiences of several countries that have addressed the problem of delivering universal, high quality primary health care, to the most underserved populations. Their cumulative experiences can inform and guide India's policy directions into action.

Purpose

A one-day national consultation was held on 27th April, 2018 to identify those elements that could guide India's efforts at improving health care in rural and underserved areas. Nested within World Rural Health Conference 2018, the consultation



brought together a range of health care practitioners, policy makers and academicians from India and other countries. Experiences

from four states (Chhattisgarh, Tamilnadu, Karnataka and Rajasthan) and four countries (Australia, Brazil, South Africa and Nepal) were shared, and discussed collectively with global evidence. This report provides a summary of discussions and key recommendations emerging from the consultation, especially those that have a relevance for India.

Policy Context

Dr Vinod Paul, Member, Niti Ayog, highlighted the political commitment made by the Prime Minister of India, who recently launched the health care mission of India, i.e. *Ayushman Bharat*, from a village in Chhattisgarh. *Ayushman Bharat* is a two-pillared program, which aims at creating comprehensive primary

central and state governments' budgets put together would indeed be spent on primary health care in the coming years.

Dr Rajani Ved, Executive Director, National Health Systems Resource Center, spoke about the new comprehensive health care system that includes the expansion of service delivery beyond maternal and child health, assured availability of medicines and diagnostics, expansion of human resources, emphasis on health awareness, leveraging of private sector partnerships and initiation of performance-based incentives. However, there are several challenges in achieving comprehensive primary health care in India: rising out-of-pocket expenditure, changing epidemiology (double burden of diseases), exclusion from healthcare due to social and geographic marginalization, and low utilization of primary health centers included. There is also a huge shortage of manpower at the primary health care level: for example, less than 40% PHCs have the necessary two doctors (as stipulated by Indian Public Health Standards guideline).

It is hoped that the above challenges will be gradually addressed through the re-designed *Ayushman Bharat* program.

health care in India, and simultaneously at providing financial protection for millions of individuals. Dr Paul reaffirmed that 65% of the

Evidence on What Works for Rural Primary Care



Family-centred health care:

There is overwhelming evidence that a public health approach that focuses on family-centred care, and comprehensive and continuing care, helps improve health care of any rural population. Such an approach integrates preventive, promotive and curative care, and is delivered by health providers (doctors, nurses and other health professionals), who are trained to manage a range of conditions, from safe childbirths and maternal care to communicable diseases and non-communicable diseases. Providers are further trained to work in teams, understand community needs, and engage with them actively.

Higher investments in health care:

India spends only a small proportion of its national budget on health care. Increased budgetary allocations to the National Rural Health Mission in previous years led to significantly improved health outcomes. Most of this improvement occurred in rural areas, reducing health inequalities. However, overall budgetary allocations to health care remain low, around 1% of the national Gross Domestic Product (GDP), restricting optimal improvements. Within India, there is evidence that states those who spend higher proportions of their budgets on health care have better health outcomes than those who spend lesser.

Along similar lines, there are concerns in South Africa and Brazil that reduced public expenditures in primary health care will inhibit provision of health care to the most marginalized populations.

State-funded health insurance and implications for primary health care:

There are concerns that India's investments in the National Health Protection Scheme (NHPS) will promote secondary and tertiary health care, at the expense of primary health care. The consultation brought about evidence and experience that will be helpful in the country's attempts at a turn around.



Courtesy: Basic Healthcare Services

Firstly, NHPS could include primary health care services. There are several examples: in high income countries such as Australia, and in low-middle income countries such as Thailand, where state funded health insurance covers primary health care in rural areas. Secondly, Primary Health Centers (PHCs) should retain the gatekeeping

functions: patients should first themselves at PHCs, and only when referred by PHCs, should they be entitled for insurance cover under NHPS for secondary or tertiary care. Such an arrangement would help in increasing the utilization of PHCs and maintain the primacy of primary health care. It would also help in ensuring the efficiency of the NHPS, by reducing unnecessary referrals.

Building and empowering primary health care teams:

Most presentations on the day highlighted the need for comprehensive health care – the ability to prevent and treat maternal and child health

conditions, as well as communicable and non-communicable diseases and injuries. Because of a shortage of physicians in rural areas, various government- and non-government organisations have engaged non-physician providers to provide healthcare in rural areas. For example, in Chhattisgarh

a new cadre of Rural Medical Assistants (RMAs) helped in significantly improving the utilization of primary health centers in some of the remotest areas of the state. A review of global evidence, shared by the WHO India Country Office, concluded that non-physician providers, when well-trained, equipped with the necessary skills, supported and supervised, can deliver quality health care for a range of conditions.

At the same time, the idea that India has a shortage of physicians was contested. Physicians are unavailable to work in rural areas not because there is a shortage: they are reluctant to work in these areas because of inadequate living and working conditions, low wages and poor training opportunities (see next section). Though the role of non-physician or mid-level providers was considered important to improve access, many experiences shared in the consultation, such as that from South Africa, Rajasthan and Chhattisgarh, highlighted a team approach. The team includes a physician (a family physician), and non-physicians: Nurses, other healthcare providers and community health workers. Such a team appears to be critical to provide comprehensive primary health care through improved access, quality of care, culturally sensitive care and equity.



Training of rural healthcare professionals:

Global evidence suggest that comprehensive health care is effectively provided by a workforce (especially doctors and nurses) that is trained to practice comprehensive health care. Above all, they should be mentally prepared to offer a full scope of services to the rural constituency they serve. In order for them to be effective in their work, their training should take place in rural health facilities, and trainees should be embedded in rural communities. Such a training requires sufficient duration and can not be hurried through.

Primary health care or a generalist approach

In rural areas, the health professionals need to provide care for a range of conditions, to people across the life cycle. They need to have a range of clinical, social and leadership skills. Current medical and nursing

education is conducted in specialized tertiary care settings and is geared towards providing care in such settings only. Contrary to this precedent, we found that in rural Queensland, Australia, medical education is geared towards a generalist approach that includes training in and for community based primary medical practice, health facility based secondary medical practice and hospital and community based public health practice.

Social accountability mandate of medical and nursing schools

WHO defines social accountability of medical schools as the obligation to direct their education, research, and service activities towards addressing the priority health concerns of the communities they serve. In the context of rural primary care, socially accountable medical or a nursing school would direct

education, research and services to address priority concerns of rural communities. A socially accountable rural medical school helped in addressing health needs of the populations of North Ontario, Canada.

Rural training sites

CMC Vellore has an affiliated group of about 200 secondary hospitals, largely in rural and remote areas, that act as training sites for non-medical personnel such as physicians and nurses. Their experiences suggest that training large numbers of doctors and nurses will require community based rural training sites, public or private, where they can practice and learn primary and secondary health care. Another such example can be found in the Bayalpata hospital, in Nepal. Experiences also suggest that it is an additional incentive, when doctors and nurses in these facilities are accorded a faculty position.

Post-training support and placement:

Evidence suggests that improved living and working conditions, better salaries, use of disruptive technology, co-operative arrangements with other rural health facilities, and continued training, all help doctors and nurses provide high quality care in rural areas. In CMC Vellore, a long-distance training program on family medicine helps the graduates enhance their skills and sense of affiliation. In Nepal, the staff of the rural hospital at Bayalpata receive continued training and exchanges.

Merely making it mandatory for nurses and doctors to work in rural areas does not work, in absence of adequate training, improvement in living and working conditions, and career progression.

Background

There are several definitions of primary health care, but most have the following key elements:

- Primary healthcare includes preventive, promotive and curative care
- Care is provided within or closer to the communities they serve
- Primary health care is universal in nature, but focuses on the most marginalized
- It provides person-focused and population-focused care rather than the disease focused care

Because of these features, primary health care helps in promoting health related behaviour, preventing ill health, and detecting and treating the illnesses early, closer to where families live. Any health system needs to have a balance of primary, secondary and tertiary healthcare.

Evidence from across the world indeed shows that the countries that have strong primary health

care systems have better health outcomes, lower inequalities in these outcomes, and lower costs of care.

Policy directions for strengthening primary healthcare in India: India's National Health Policy 2016, along with the budgetary announcements made in February 2018, take a two-pronged approach for strengthening healthcare in India:

- Improving access and quality of primary health care through strengthening 150,000 sub-centers (transforming them to health and wellness centers), and
- Improving access to secondary and tertiary care through a near universal health insurance scheme.

Information and insights from different sources, both within and outside India, have been helpful in achieving these policy objectives.

Translating the policy directions into action:

With a growing economy, India's rural infrastructure is improving, as is the access to technology. All of these have the potential to transform the health status of its populations. Different state governments have set up strong primary health care systems, each of which have their own unique features. Experiences from these health programs can guide further course of action. Many not-for-profit organizations that work in difficult to reach rural areas have also worked to innovate, in order to improve access, responsiveness and quality of primary healthcare. For example, to offset the shortage of physicians in rural and inaccessible areas, some programs have worked with primary care nurses, while others have used technology for improved diagnostics and for tele-consultation and training. Notably, most state-run health programs have partnered with communities to promote community participation. Though these models

have a limited coverage, their experience, insights and evidence from the ground has substantial potential to inform future programs and policies. Finally, there are substantial, long term experiences from several countries that have addressed the problem of delivering universal, high quality primary health care, particularly to the underserved populations.

Against the above background, a national consultation on rural primary health care was conducted in New Delhi on 27th April 2018, with following objectives:

1. To share learnings from experiences and evidence of rural primary healthcare within India and from across the world;
2. To identify key elements of strong primary health care systems that can strengthen primary health care in India; and
3. To explore partnerships for strengthening primary health care in rural India.



For purposes of the consultation, we have defined primary healthcare system as one that provides preventive, promotive and primary curative care, is located within the communities and engages them, provides technically appropriate care by appropriately skilled providers. It has good linkages with the secondary and tertiary healthcare sector, and helps the families to navigate these levels of care when required. A *standalone health post or a health worker or delivery of selective interventions is not considered primary health care in this definition.*



The consultation brought together a range of primary health care practitioners, policy makers and academicians from India and other countries, who shared testimonies and evidence gathered from the field. Experts from some of the leading institutes in India and overseas were in attendance. India's policy



Dr. Raman Kumar, AFPI, speaks at the inauguration of the consultation

context was provided on the day by representatives from the Niti Aayog and National Health Systems Resource Center. The Academy of Family Physicians of India, and World Family Physicians Association-Rural (WONCA-Rural) provided the physicians' perspective of strengthening rural primary care in India.

Doctors and Nurses need skills and support to provide comprehensive health care in rural areas

Dr. Raman Kumar is founder and President of Academy of Family Physicians of India, which co-hosted the World Rural Health Conference-2018. Dr. Kumar is a strong advocate of family-centred healthcare in India.

Dr. Raman Kumar spoke of the key barriers that young doctors face when they enter the primary health care system in rural India: high levels of morbidity, the changing disease burden, and inadequate skills to deal with the setting. He raised the concern that MBBS courses currently train doctors to work in tertiary care settings, not in the setting of a rural primary health care centre. Revisiting the Mehta committee report (1983 - '84) and the National Health Policy (2002),

Dr. Kumar emphasized the need for general practitioners or family physicians i.e. those that

argument that there aren't enough doctors to provide primary health care and argued instead that

private sector, doctors, nurses and other healthcare staff do not receive adequate salaries and support. He mentioned that an expected one million MBBS graduates will join the Indian workforce in the next five to 10 years. It will be vital to India's health systems that they are "engaged fruitfully" to provide comprehensive healthcare. A compulsory rural posting, in absence of the requisite training, salaries and support, is not a suitable policy option. He also emphasized on starting family medicine departments at all medical colleges in India in compliance to NHP 2017 and 92nd parliamentary standing committee on HFW 2016 report.

“
[Nurses] are able to go to war zones...they are able to go to Iraq. Why can't they go to Bihar, Jharkhand, Chhattisgarh? Why can't we attract them there? We must think about this.
 ”
 - Dr. Raman Kumar, President, Academy of Family Physicians of India.

are trained in family medicine and are skilled to provide comprehensive care for people of all ages and requirements. Dr. Kumar also disputed the

doctors haven't been equipped or offered necessary resources to work in rural areas. According to him, in the government as well as the

Policy initiatives for strengthening primary health care in rural India

Dr. Rajani Ved is Executive Director, National Health Systems Resource Center. NHSRC provides technical assistance to the Ministry of Health & Family Welfare, India, and closely works with the National Health Mission. She is at the forefront of the Government of India's plan to strengthen comprehensive primary healthcare.

Dr. Rajani Ved spoke on the

policy initiatives of Government of India, aimed at strengthening primary health care. Comprehensive health care is one of two pillars of the newly launched programme, Ayushman Bharat (the other being National Health Protection Scheme). There is a recognition now that unless India builds a strong

comprehensive primary health care system, we cannot hope to accomplish major advancements in health status of populations. In turn, strong primary health care programs need strong health systems in place. In an effort to address this gap, the Ministry of Health and Family Welfare had set up a task force on

primary health care, whose recommendations formed the basis of the new health care design. Accordingly, financial commitments were made in the 2017 union budget for turning 150,000 sub centres and PHCs into health and wellness centres by 2022, starting with about 15,000 centres in 2018-'19.



Besides the financial allocations, training courses have been introduced in order to bring in additional staff in the form of Ayurveda practitioners and community health officers, and creating a new cadre of accredited mid-level providers. The re-designed *Ayushman Bharat* program has also drawn considerably from the “leveraging [of] learnings” from previous attempts at health systems strengthening. Measures, such as the launching ambulance services, strengthening infrastructure and adding human resources at every level, have all contributed towards building a strong base for the proposed redesign. Moving ahead, expansion of service delivery beyond the maternal and child health, assured availability of medicines and point of care diagnostics, expansions of human resources and “multi-skilling” of the existing ones, greater emphasis on health awareness, leveraging private sector partnerships and initiating performance-based incentives are some of the key initiatives that will define a comprehensive primary health care system.

Dr. Ved also shared an iteration of some of the key health care challenges in India, as well as proposed policy responses to these challenges:

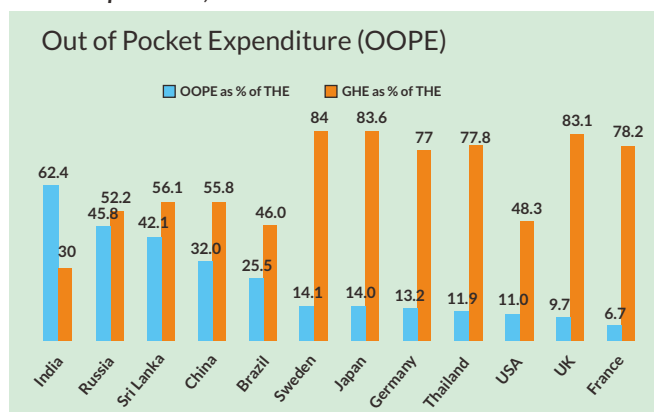
- **Rising out of pocket expenditure:** People spend almost double the amount out of their own pockets on health as compared to the expenditure by the government. In the rest of the BRIC countries this ratio is inverse. Governments spend much higher proportions on health care in comparison to those spent by citizens out of their own pockets. The policy response is to expand affordable services at the rural and primary level.
- **Double burden of diseases:** While India has seen a decline in neo-natal deaths and deaths due to respiratory diseases, the burden of deaths due to non-communicable diseases has increased. The policy response is screening, prevention and management of the five common NCDs, and taking care of NCDs down to the community level.
- **Low uptake of primary health care:** The third major challenge is the low uptake of care in primary health centres across the country. The response to this challenge has been to transform the lower level health facilities into 'health and wellness centres', increasing investment in these centres and ensuring that they are close to the community.
- **Fragmented structure of care:** Another big issue is the fragmented care. We have no gate-keeping function, “at any level”, with patients accessing primary, secondary and/or tertiary care facilities for the slightest or the biggest complaints, thus fragmenting the burden of care and compromising the quality of care that can be offered for health complaints of any

severity. The policy response has been to develop referral protocols and robust information technology-based solutions, maintaining a continuum of care from community to facility.

- **Reaching out to the most underserved populations:** Finally, around 20% of people continue to exist outside the ambit of public health care due to marginalisation, including physical or social exclusion. The government response has been to carry out population enumeration to estimate exact denominators for each facility. With such knowledge, primary health centres should know how many people they've been set up to serve, and in which regions or areas they live. Citing the United Kingdom example (of communities or neighbourhoods being registered at particular health care centres), Dr. Ved emphasized that this future empanelling exercise will help sub-centre (to be health and wellness centre) staff actually “target their services” based on the population.

It is hoped that the above challenges will be gradually addressed through the re-designed *Ayushman Bharat* program.

Figure-1: Comparison of Out of Pocket and Government Health Expenditure, India and Select Countries





India's path to universal health coverage

Dr. Vinod K. Paul is full-time Member of Niti Aayog, the premier policy 'Think Tank' of the Government of India. He is a renowned paediatrician and medical researcher and has contributed significantly to shaping India's policies and programs on maternal, new-born and child health. Dr. Paul leads the health and nutrition portfolio at the Niti Aayog.

Dr. Vinod Paul highlighted the political commitment made by the Prime Minister of India, who recently launched the primary health care mission of India, i.e. *Ayushman Bharat*, from a remote village in Chhattisgarh. This commitment comes along with the acknowledgement that health indeed is a "political narrative" in India. *Ayushman Bharat* is a two-pillared, umbrella program, which aims at creating comprehensive primary health care in India while simultaneously providing financial protection for millions of individuals (also referred to as "Modicare"). He reaffirmed that 65% of the central and state governments' budgets put together would indeed be spent on primary health care in the coming years.

Dr. Paul emphasized that the key to strengthening primary health care is to make it comprehensive; by bringing all specialised interventions together, combined in service packages (for example,



Dr. Vinod Paul, in attendance at the inaugural session of the consultation.

vector control, yoga, indoor pollution etc.). Such comprehensive service packages can serve defined catchments consistently and cater to people of all ages and backgrounds. To that end, Dr. Paul asked that the participants of the consultation contribute by making suggestions towards comprehensive care packages that can meet all of these requirements, as well as ways in which they can be delivered.

In addition to this, Dr. Paul emphasized the critical role of "jan bhagidari" or people's participation in setting up successful primary health care

systems. Citing the recent eradication of polio in the country and ongoing Swachh Bharat (Clean India) mission as examples of public action in development, Dr. Paul asked the participants to share learnings and contemplate the ways in which these movements can be emulated, to create a comprehensive, inclusive and participatory health care mission. Dr. Paul also emphasized that solutions be found to encourage participation and inclusion in defined catchment areas; for example, Panchayats or village-level leaders can play a significant role in encouraging inclusion and establishing inclusive



We are seeing a game-changer emphasis on health in India...with resources like never before...our key mandate is to turn development [health] into a people's movement.



-Dr Vinod K. Paul,
Member, Niti Aayog



Global and Indian Evidence

What works for rural primary care? Global Evidence

Dr. Bruce Chater is Medical Superintendent & General Practitioner in the small rural town of Theodore in the state of Queensland. He is also Secretary of Rural and Remote Clinical Network at Queensland, Head of the Discipline of Rural and Remote Medicine at University of Queensland, Australia and Chair, WONCA working party on Rural Practice.

There's "overwhelming evidence" on what works for rural care around the world. Dr. Bruce Chater drew from his learnings as a rural physician and an academician to discuss some of his findings over decades of experience serving people in Theodore. Dr. Chater explained that generalist doctors can do a lot to deliver comprehensive and continuing care and integrate preventive and promotive care in the process. Family-centred care as practiced by generalist doctors, takes a population-driven health approach, that involves delivering everything from primary health care to secondary and emergency care across age groups – whatever the population or the catchment area that the rural or family doctor is meant to serve, needs.

The rural generalist movement has been adopted in Canada, Australia and other western countries, and more recently in Japan. The key to such a practice would be to not specialise in one kind of medicine

"Those people need to have a full scope [of medical practice], if we are to comprehensively cover that scope [rural catchments] with the others in the team."

He also underlined that the attitude and training



Dr. Bruce Chater addresses the participants on global evidence on rural primary health care

but be able to manage a range of conditions.

To that end, Dr. Chater emphasized, young medical graduates who get to work in rural areas should come out of medical school with both, the ability and the attitude to carry out a wide range of procedures, treatments and follow ups. "There's no point in having someone who specialises in one discipline, practice in rural [settings]," Dr Chater explained.

needed of a young graduate entering the field, is that they be willing to receive appropriate training and be mentally prepared to offer a full scope of services to the rural constituency, with the support of disruptive technology, external subsidies, support and two-way cooperative arrangements with other rural health care set ups where needed. With these measures towards integration of services,

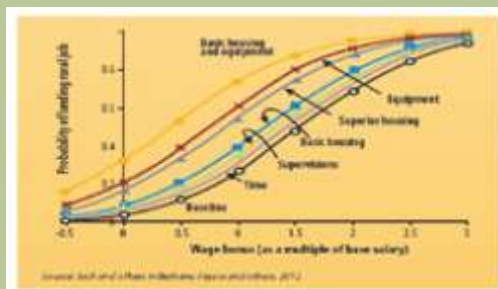
Dr. Chater also explained that medical professionals must be integrated or embedded with the communities they serve, and thus either come from those communities and/or be sent to school and trained within rural communities. "It is important that rural doctors be seen as the best of doctors, not the worst of doctors."

In order for medical professionals to live and work better and practice a more general scope of medicine, they would need improved living and financial conditions along with professional support. Dr. Chater argued that in the Indian context, the compulsory placement in rural settings – a controversial and sometimes sore point for MBBS students in the past – does not and should not absolve the system from making the placement an attractive training opportunity for young doctors with the right facilities and appropriate monetary compensation. The bottom line, according to Dr. Chater, is that policy-makers must (be willing to) invest in facilities, good housing, technology support ("not substitutes"), and much higher wages for postings in rural settings, in order to encourage a flow of human resources to rural areas. This way, Indian administrators and politicians can expect to get "more bang for their buck" in rural primary health care systems. Dr. Chater noted that Indian evidence in medical journals have in the past noted the same actionable observations.

Figure-2: Impact of investment in housing infrastructure on nurses opting for a rural job in Ethiopia

Discrete Choice Experiment

- Nurses in Ethiopia
- Willingness to accept a rural job
- A dose response curve



What has worked for primary healthcare in rural areas? A discussion of Indian evidence



Dr. Rajesh Kumar is currently the Dean (Academic) of the Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh. He is a public health physician, educationist and researcher and has helped Indian state governments reform and strengthen their health systems.

Dr. Kumar started off with a quick recap of the history and evolution of public health in India. Under the British in India, the public health system originated in urban hospitals – there was no tier system or population-driven approach. If you were sick and there was a hospital near you, you could attempt to access health care there. Vaccination for small pox, and sanitation drives were added to the public health programs subsequently to address the spread of communicable diseases.

Subsequently, Health Survey and Development Committee Report (1946), popularly known as the Bhole Committee report, guided the designing of primary health care system of independent India. A network of primary health centers and sub-centers were set up across India. Public health programs took the population-based approach and focussed on treating and controlling communicable diseases and promoting family planning. Following the Alma Ata declaration in 1978, there was a significant emphasis on disease prevention, health promotion and community participation. There was also a focus on modification of individual behaviours and social environments that communities live in.

In 2002, the National Health Policy identified weak primary health care systems and low resources for health sector as critical



Dr. Rajesh Kumar makes a point during his address.

constraints for India's overall development indicators. It was also acknowledged that though public health programs remain the most important source for delivery of preventive services, such as immunization, private sector remains the predominant source for curative care. The policy recommended increased allocations to health sector and strengthen primary health care systems.

The then newly formed National Rural Health Mission NHRM helped in translating these policy intents into action. During this time, India also witnessed a considerable raise in health allocations in national budgets. The evidence suggests that with the introduction of NRHM, mere rhetoric on strengthening primary health care started manifesting on the ground. Between 2005 and 2016, India witnessed a gradual expansion of human resource deployment in public health, with a growing number of Auxiliary Nurse Midwives (ANMs), Accredited Social

Health Activists (ASHAs), nursing staff and allopathic doctors. All these inputs led to an improvement in key health indicators: for

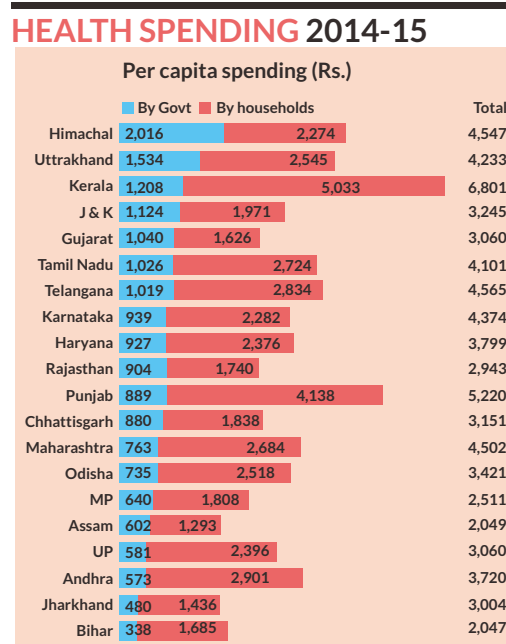
example, India's Infant Mortality Rate (IMR) fell by more than 20 percentage points during this period. Increased allocations to the health sector were instrumental in bringing about this change.

While the reform brought about by NRHM led to improvements in health outcomes, its full potential was restricted by low allocations to health by certain states, and inadequate improvements in infrastructure and deployment of human resources. There was also inadequate emphasis on health promotion. Nevertheless, Dr. Kumar emphasized that the

current structure of primary health care services and the reforms brought about by NRHM have served well to improve access to health services and improving health outcomes.

Further increasing the public investment in health (Dr. Kumar recommended a budget of 5% of the national GDP expenditure on health, 70% of which should be on primary health care); strengthening the role and functionality of PHCs and entrusting these PHCs to support the proposed health and wellness centers and frontline functionaries. Dr. Kumar also suggested that PHCs should retain the role of primary management and referral to secondary and tertiary health facilities covered

Figure-3: Per capita expenditure on health, by state (2014-15)



under the National Health Protection Scheme. Such a gatekeeping function would help strengthen primary health care, while ensuring appropriate referrals to secondary and tertiary care.



Experiences from India



CMC Vellore on equipping doctors for rural health care

Dr. Anand Zachariah is Professor of Medicine at Christian Medical College, Vellore, with a strong service and rural healthcare orientation. Dr. Zachariah has been at the center of CMC's various efforts to prepare medical students for working in remote and rural areas.

Dr Anand Zachariah shared that over a period of 25 years, CMC Vellore has developed several innovations in education that reflect its philosophy and mission of training competent and committed health professionals, who can work at the primary and secondary levels. Some of these innovations include:

Clinical training-clerkships and internship training:

Students and interns are posted in block hospitals as members of the clinical team(s) in Medicine, Surgery, Obstetrics and Paediatrics. The postings prepare them to function independently, and with limited resources. During their internship they also function as independent primary care doctors.

Community health training:

Students are immersed in rural communities during the first three years. They live in rural communities, "adopt" families, understand their socio-economic background, study a local health problem and design health programmes.

Family medicine orientation:

Students receive training in the principles of family-centred care.

Secondary hospital postings:

Students are sent in small groups to select mission hospitals in rural and remote parts of the country for five weeks across their training period. They learn the principles of primary and

needs among students

Based on CMC Vellore's experiences, Dr. Zachariah suggested that medical colleges need to be linked with the district health system and be

b. Provide adjunct faculty status for teachers outside medical colleges, as an incentive

c. Engage medical college teachers in primary and secondary care to orient them in the rural realities of clinical practice

d. Provide practical learning through the strengthening of internships

He suggested that a distance education diploma in family medicine, and an on-site mentoring support should be offered to all medical graduates undergoing rural postings. The diploma should be convertible to an MD in Family Medicine with an additional training. Finally, he emphasized that governments should encourage different medical colleges to experiment with different models of socially relevant medical education.



secondary care, as well as about the role of a rural hospital in a remote location.

Distance education course in family medicine:

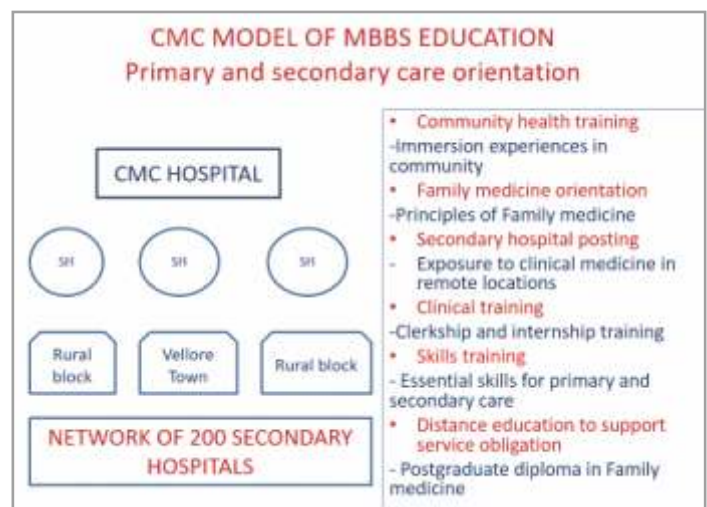
All CMC medical graduates undergo a two-year service obligation period at rural mission hospitals. CMC has designed a distance education course in family medicine for this period, to help students as they continue to learn while working, and translate their learning into practice.

Key ingredients of a CMC training for rural physicians are:

1. High quality clinical training
2. Preparing students for independent care at the primary- and secondary-level
3. Inculcating an appreciation of local/rural health

responsible for health care of a (larger) population. Dr. Zachariah also suggested following measures to reorient the MBBS curriculum towards rural healthcare. This would include such measures as:

- a. Provide adequate clinical exposure to medical students on primary and secondary care



Providing comprehensive health care in rural Central India

Dr. Yogesh Jain is co-founder of Jan Swastha Sahyog (JSS), a not-for-profit organization working in Chhattisgarh that looks to provide comprehensive primary health care to rural, tribal populations of the state. Dr. Jain is a paediatrician and a public health physician.

Dr. Yogesh Jain shared the experiences of his organisation, Jan Swasthya Sahyog, which runs a comprehensive health care program in the rural, predominantly tribal parts of Chhattisgarh that includes a total population numbering 39,565 people (62% adivasis), across 72 villages. The program has a three-tier approach: health workers at village level (that provide 53% of health care), sub-centers (equivalent to HWCs) that provide 36% of health care; and a referral hospital, that provides 11% of all health care.



Tribal women in Chhattisgarh using a mobile for disease surveillance

Comprehensiveness of health care is provided by: ensuring management of communicable diseases, non-communicable diseases and injuries; and ensuring continuity of care across the three tiers of care. A team of health workers across the three tiers: village health workers at the village level, senior health workers and ANMs at the sub-centers (or HWCs); family doctors, specialized doctors, nurses and laboratory technicians at hospital level ensure

availability as well as high quality of services. Such a system is not independent of doctors but is not overly dependent on doctors either. Technology is used judiciously in order to capture patient records, for disease surveillance and for training.

Dr. Jain emphasized the role of HWCs; in their settings, these centres provide screening and ongoing care for NCDs, treat common emergencies, manage

disease-based peer support groups, provide MCH and reproductive healthcare, detect and manage epidemics and provide end of life care. These centres also function as training centres for doctors and health workers.

The presentation highlighted the importance of comprehensiveness, continuity of care, a team approach that includes physicians, mid-level providers and village volunteers, and strong linkages between the three tiers of care, especially in view of changing epidemiology of disease burden. Going ahead, mid-level providers at HWCs will need intensive training, legitimacy and support of referral facilities for fulfilling their role.

Team approach to deliver primary health care in tribal Rajasthan

Dr. Sanjana B Mohan is a paediatrician, epidemiologist and a public health physician. She is co-founder of Basic Health Care Services (BHS), an Udaipur based organisation that provides low cost, high quality primary health care in remote and rural areas of South Rajasthan through a network of AMRIT Clinics.

Dr. Mohan described the areas where BHS operates as remote, with limited connectivity and with scattered, predominantly tribal populations living in extreme deprivation. While there is a high burden of morbidities

(such as tuberculosis and malaria), and malnutrition, public systems are far and often of poor quality.

In such areas, each AMRIT Clinic provides primary healthcare through a team of three primary care nurses, supported by a Primary Care Physician who visits the clinics once a week, and is available over phone 24X7. Two community health workers provide linkage of the communities with the clinics. Each clinic serves a population of 12,000 to 15,000, 95% of which is tribal.

The clinic team provides out-patient care for all age groups, conducts safe deliveries, and manages and refers emergencies for critically ill patients. The clinic is equipped to conduct essential tests and dispense a range of required drugs. An ambulance helps in facilitating referrals to the designated [referral] hospitals. The clinic staff also conduct regular outreach sessions to provide antenatal care to pregnant women, weigh children under-three and counsel their families on behaviour change. These

sessions are extremely critical for behaviour change: for example, when the clinics started, pregnant women were reluctant to come for ANC sessions even closer home, now they walk several kilometres to seek the care from clinics. Finally, the clinic staff also visit households to provide postnatal care to mothers-new-borns and especially vulnerable group of patients such as those suffering from tuberculosis and from severe acute malnutrition.



There has been a progressive increase in footfall at the clinics over the years, with women representing 62% of all patients. Of all the patient visits, larger proportions (60%) are managed by nurses (with telephonic support from physicians, when required), and 40% are managed by the visiting physicians, with support from the nurses. Continued availability of nurses help in ensuring that acute conditions are managed by the clinic on all days and all times: about 70% of all cases of diarrhoea, pneumonia and malaria are managed by nurses. Visiting doctors provide initial detection and management for a large proportion of chronic diseases (60% of all visits), with continued care for these conditions provided by the nurses (40% of all visits). Regular availability of nurses, and the fact that they are women drawn from local communities, help in building a rapport with the communities. This, in turn, allows health care workers to provide quality, timely responsive care, especially to women. “The rapport that they build with the community is very

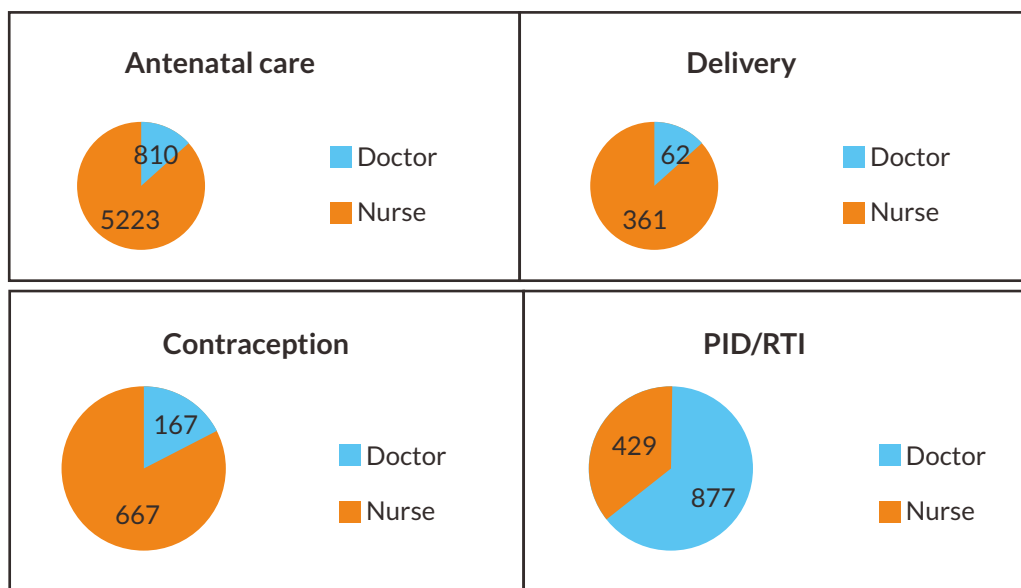
important to the [success] of the initiative”, as Dr. Mohan explained to the participants. Dr. Mohan further emphasized that the AMRIT experience suggests that a team consisting of primary care nurses, supported by physician and community health workers, can adequately provide comprehensive and responsive health care services in remote and rural populations. However, this requires



intensive training, standardization of protocols, tele-connectivity between the clinics and physicians and

of course, the availability of required diagnostic tools and drugs.

Figure 4: Numbers of women with RH conditions managed at AMRIT Clinic, by type of providers (Doctors or Nurses



Stated funded health insurance in Karnataka and its implications for primary healthcare



Dr. Devadasan is a public health physician with a long experience of delivering rural health care and designing and evaluating insurance schemes for the poor. He is Director of Institute of Public Health, a not-for-profit public health research and training organization in Bengaluru.

Dr. Devadasan described the model of State Health Insurance in Karnataka and shared evidence of its impact on reduction of out-of-pocket expenditure and health outcomes among the poorer families. He then drew on this experience, as well as that of other countries, to suggest how strategic purchasing of healthcare can strengthen primary healthcare.

Through a referral system set up with the help of the *Suvarna Arogya Suraksha Trust (SAST)*, doctors can refer patients who need emergency care or surgeries for such illnesses as cardio-vascular conditions, cancers etc. The hospital, based on the patient's financial viability, raises a request to SAST, which pre-authorizes the treatment or surgery

requested for the patient. The hospital in turn raises a pre-fixed bill for SAST to reimburse on the patient's behalf. This scheme was first started by the Karnataka government for below poverty line (BPL) families, then slowly extended to APL families, then government employees and their dependents.

He shared evidence from a study that looked at a population of 60,000 BPL households, half of which had access to the scheme and the other half did not. Although the socio-economic characteristics were the same across the two groups, those enrolled in the scheme had significantly reduced out of pocket (OOP) expenditure (about Rs. 50,000 lesser), improved quality of care, lower hospitalizati-

on, and significantly lower mortality (BMJ 2014;349:g5114).

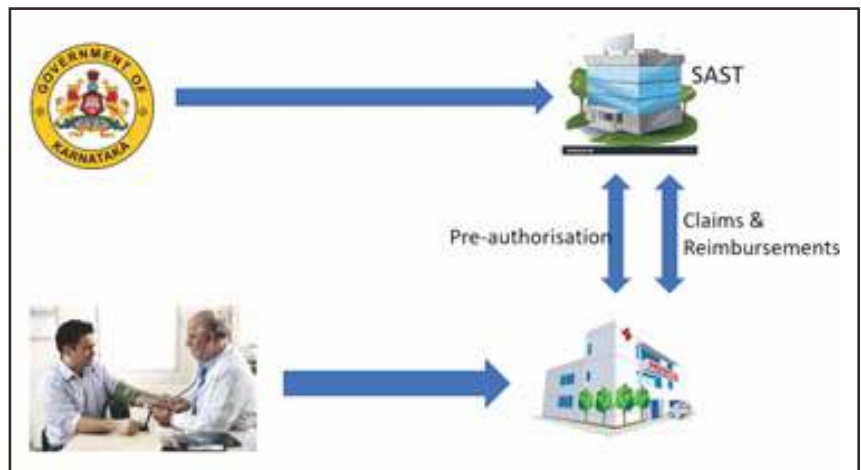
Dr. Devadasan highlighted the following factors that led to success of this scheme in reducing OOP expenditure as well as health outcomes: accrediting the providers, pre-authorisation of treatment or surgery (a form of gatekeeping), adherence to rational treatment, financial incentives to improve quality of care and pro-active [regular] contact with patients.

Moving ahead, a state funded health insurance (such as a National Health

Protection Scheme) can increase access of the poorer families to secondary and tertiary care, without further impoverishing or indebting them. However, in such an arrangement, the patients should be referred only through a PHC- it would reduce unnecessary referrals and promote utilization and credibility of PHCs.

Similar principles of strategic purchasing can be used by governments for purchasing primary health care services. Limited qualified private providers will however restrict the potential in rural areas as compared to urban areas.

Figure-5: Patient flow, claims and reimbursement under SAST



Experience of deploying mid-level health workers in rural Chhattisgarh

Samir Garg is Program Officer with the State Health Systems Resource Center (SHSRC) of Chhattisgarh. The Chhattisgarh SHSRC has been closely involved in training and deploying Rural Medical Assistants to improve access of remote and rural communities to primary health care over the last ten years.

Mr. Garg's presentation described the experience and learnings from the establishment of a Rural Medical Assistants (RMAs) cadre that has come to be the "mainstay of the Health and Wellness Centre initiative in Chhattisgarh".

At the time of its formation, the state had to deal with a huge shortage

of human resources in health, particularly qualified doctors. Given this shortage, the state initiated a three-year Diploma in Practice of Modern Medicine and Holistic Health, under a new state act. The participants of the diploma were trained in six rural institutes, followed by one year of training at a rural

PHC. Till date, 1335 participants have graduated under this act, and 1228 are employed by the state in rural PHCs, as Rural Medical Assistants-RMAs (now called Assistant Medical Officers). While half of them are on regular positions, the other half are contractual.

They are trained and expected to provide basic maternal and child health care, conduct safe deliveries, suture small wounds, drain abscess, dress burns and apply splints for simple fractures. Besides, these workers provide preventive health care and primary curative care for other conditions.

A Public Health Foundation of India (PHFI) study run with the NHSRC and SHRC in

2010 assessed competence and prescription practices of RMAs and compared these to those of paramedical personnel, AYUSH medical officers and allopathic medical officers. The study further looked at the utilization of services and patient satisfaction across these providers. RMAs performed as well as allopathic medical officers, and better than other cadres. Since the

induction of RMAs, the utilization of rural PHCs has increased more than two-fold, given that all these PHCs have at-least one RMA, and some have two.

The study recommended that with the right training, exposure and placement, clinical care providers with shorter trainings can significantly improve people's access to primary health care in remote and rural areas. These RMAs are now

being inducted as Mid-level providers for Health & Wellness Centers in Chhattisgarh because they are well trained and are acceptable to the community.

[Subsequently, however, the state had to freeze the training of RMAs after the Indian Medical Association filed a case in the state High Court, questioning the legality of non-physicians providing clinical care. At the time of publication, this case was still sub-judice.]

National Rural Health Mission's (NRHM) experience of nominating rural physicians for family medicine training

Mr. Prasanth K Subrahmanian is a Senior Consultant at National Health Systems Resource Center (NHSRC), New Delhi, a technical resource agency to Ministry of Health and Family Welfare, Government of India. He has been involved in promoting family medicine training among government rural physicians.

The National Health Systems Resource Centre (NHSRC) had recommended particularly that rural physicians are enrolled in the Post Graduate Diploma in Family Medicine (PGDFM) offered by CMC Vellore. NHSRC assisted in revising the curriculum for the course, identifying the training sites, advocating with state governments for appropriate posting after training, and collecting feedback from the trained doctors. Mr. Subrahmanian shared in particular the National Rural Health Mission (NRHM)'s experience of encouraging state governments to get their



Mr. Subrahmanian of the NHSRC speaks at the consultation

doctors placed in rural areas trained in family medicine.

PGDFM were offered accordingly in Bihar, Chhattisgarh, Uttarakhand, and in Tamil Nadu between 2010 and 2018. Barring Tamil Nadu (934 doctors nominated), and Bihar (109 doctors nominated), there were very few nominations from other pilot states. The feedback generated from the candidates suggested that they felt there was not enough of an incentive for them and that there were no sanctioned positions at Community Health Center for family medicine qualified

consultants.

At a national consultation on family medicine in 2013, the program was reviewed and following recommendations were made to strengthen skills of rural doctors:

- Central government should promote Family Medicine Programs and develop district hospitals as training sites
- Those who have undergone a training in Family Medicine programs should be preferentially posted at Community Health Centers.

- The government should invest in e-learning platforms for rural doctors

In addition, it was recommended that state governments should set up Family Medicine Programs in medical colleges and make rural postings mandatory for such programs. They should also develop a cadre for rural physicians with clear career paths. Medical Council of India should revise the undergraduate curriculums to align more with rural priorities and develop standards for training sites for family medicine. Similarly, it was recommended that Nursing Council of India develop a program for family centred care for Nurses, who would be team members at Community Health Centers.

[Subsequently, a few medical colleges have set up an MD Program in Family Medicine. Besides that, to the best of our knowledge, other recommendations have not been met.]

Using technology for delivering healthcare in rural areas



Dr. Sabahat Azeem is CEO of Glocal Healthcare Systems (GHS), a private healthcare organization that uses information technology to deliver health care. He is a champion of use of technology for health care.

Dr. Azeem shared his experience of developing and setting up an IT-based integrated solution for health consultation in the form of “Digital Dispensaries”. Identifying access and the lack of qualified professionals diagnosing and treating those in need of primary health care, Dr. Azeem talked of the digital dispensary providing ‘Hospital in a Box’ style solution. At present operational in a few hospitals in West Bengal, Bihar, U.P. and Odisha, Dr. Azeem suggested that PHCs could also host the digital dispensary, a



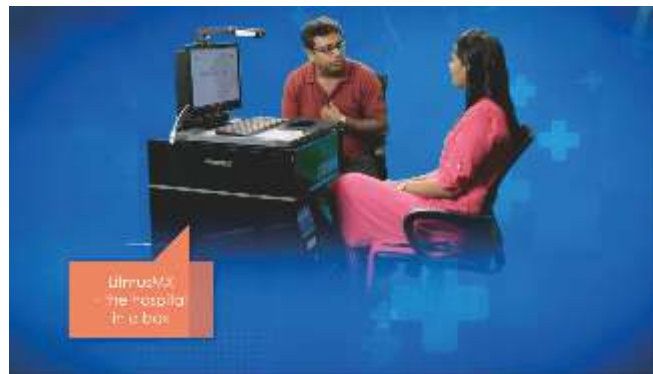
and diagnose them, following which the same dispensary would dispense medication prescribed by the consulting doctor. All of these interactions would be digitally powered, and backed by a Clinical Decision Support System, thus potentially reducing the chances of “human error”.

Dr. Azeem argued that typically, when people think rural, they imagine sub-

mechanism through which doctors can consult with

patients virtually, over defined periods of time,

standard facilities and service; on the contrary, because the setting is rural and logistical expenses higher, the technology, facilities and services provided there should be of higher and longer-lasting quality. Dr. Azeem suggested that solutions like digital dispensaries are crucial to bridging the human resource gap in rural India, with quality and with reduction of out of pocket expenditure.



Courtesy Glocal Healthcare Systems



Global Experiences

Organizing health care in rural and remote areas: Experience from Queensland, Australia



Dr. Bruce Chater is Medical Superintendent & General Practitioner in the small rural town of Theodore in the state of Queensland. He is also Chair of Rural and Remote Clinical Network at Queensland, Head of the Discipline of Rural and Remote Medicine at University of Queensland, Australia and Secretary, WONCA working party on Rural Practice.

Dr. Chater shared the journey of strengthening health care in rural and remote areas of Queensland. A review in 2005 showed that while there were some existing facilities and medical practitioners in rural areas, and there was an existing college of rural and remote medicine and a training curriculum (there were also some rural medical schools), rural health care was losing its glamour against the tide of specialization. The facilities were ageing. In absence of fresh infusion of young doctors, and nurses; the health workforce was also ageing. There were increasing restrictions on what GPs could or could not do.

In a landmark workshop conducted in the year 2005, the famous Roma agreement was drafted. The twin goals were: supplying rural & remote Queensland with sufficient and superbly trained rural, generalist practitioners; and providing Australian (medical) graduates a premier

pathway to rural generalist practice. Rural generalist was defined as a medical practitioner who is credentialed to service in following settings: Hospital and community based primary medical practice, hospital based secondary medical practice (general as well as specialization in one discipline), and (possibly) hospital and community based public health practice.

A range of measures were taken starting from internship, where a rural career was “marketed and promoted” to young medical graduates. Young graduates entering this field are then given the “royal carpet treatment”. Their skills are advanced in a range of disciplines: in emergency, mental health, MCH, and other issues that affect persons in a rural community on a daily basis. The skill advancement continues beyond the residency

program and during service (see inlay).

Currently, in Queensland, the rural medical training includes the rural generalist education program that offers a two-level, online or flexible delivery system, training practitioners for clinical and non-clinical abilities. The clinical streams offered include for seven streams: medical imaging, nutrition and dietetics, occupational therapy, pharmacy, physiotherapy, podiatry and speech pathology.

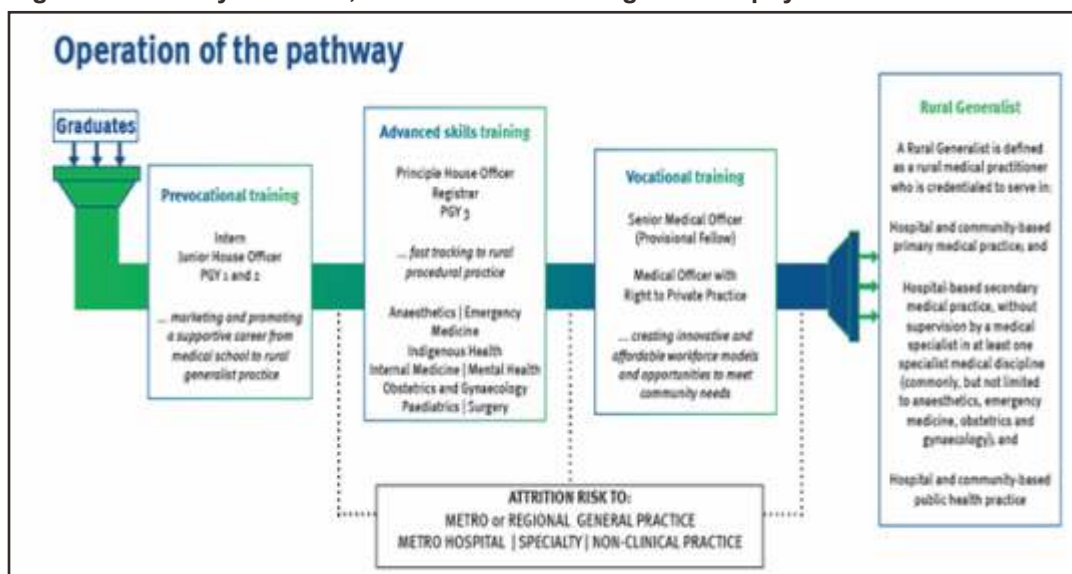
The University of Queensland, where this training is offered, has seen a progressively increased intake of interns in rural health: from 10 in 2010 to 130 in 2016, more than half of the current participants are women. Most of them have chosen to work in rural areas subsequently: from five in 2008 to 133 in 2016, most in the

public sector. The students training here are being motivated to champion the rural public health system, while sourcing support of technology, as well as other assistants and team members.

Dr. Chater outlined following factors as responsible for success in ensuring a significant increase in doctors opting to train and work in rural Queensland:

- Starting early, during internship
- Having a champion within the health system
- Embracing generalist practice (as opposed to specialism)
- Embracing appropriate technology
- Rural immersion

Figure-6: Pathway to attract, train and retain rural generalist physicians in Queensland



Restructuring primary healthcare in rural South Africa



Dr. Ian Couper is Professor of Public Health at Ukwanda Centre for Rural Health at the University of Witwatersrand in Johannesburg, South Africa.

Dr. Couper is a champion of primary healthcare and team approach to primary healthcare.

The vision for primary healthcare in South Africa was shaped by the National Health Services Commission (1942), which was tasked with advising on the establishment of a National Health Service (NHS), and the Gluckman Report (1944), which envisaged a countrywide national health service that is made available to all on the basis of their needs, rather than their means. At the time, given the political scenario and apartheid in South Africa, this vision could not be implemented as envisaged. However, these principles were brought back into the national discussion post 1990 (in 2014), to help shape the National Health Insurance scheme – a mission to shape universal health coverage for all, with primary care being re-engineered to make it affordable.

Dr. Couper emphasized the role that the population-based health approach plays in designing successful rural health programs. He explained that Primary Healthcare re-engineering is one of the key elements of Universal Health Coverage plan of South Africa, initiated about four years ago. In some ways, the re-engineering is an attempt to “recapture the

past”.

PHC re-engineering is an attempt to revitalize SA's healthcare with the purpose of squarely



Dr. Ian Couper responds in an exchange on global evidence

addressing inequity. It has three key objectives: to strengthen the district health system, to place greater emphasis on population-based health approach, and to pay greater attention to factors outside health sector that impact health outcomes. To achieve these three objectives, there are three key approaches: establishing district based clinical specialist teams with focus on MCH, establishing ward based PHC outreach teams, and strengthening school health services.

District specialist clinical teams are composed of a Family Physician and a Primary Health Care Nurse, an Obstetrician and an advanced Nurse Midwife; and a Paediatrician – and a Paediatric Nurse. The District specialist team provides MCH care at district hospital (secondary care) as well as supervise

and support the Community Health Clinic and cluster of PHC Clinics for delivering primary health care. Each PHC Clinic houses 2-3 PHC

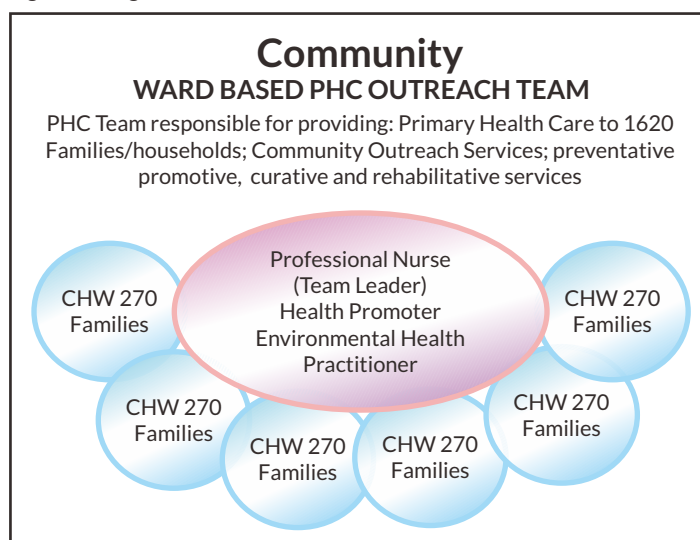
rehabilitative services to the covered population.

Dr. Couper highlighted some unresolved issues in this reengineered model:

the role of Primary care doctor is not well defined, rehabilitative services are neglected, and the focus still remains largely MCH and comprehensiveness is difficult to achieve. Within the UHC approach, there are not enough funds for rural care and enough provisions for attracting health care workers to serve the poor, especially in rural areas. “Where does the money come from? Who will

provide the care?” In absence of these, he raised his scepticism and said there is a fundamental access flaw in the universal health coverage plan and

Figure-7: Organization of PHC Outreach Team in Rural South Africa



Each PHC team is responsible for about 1,630 families of a ward and the families are divided among six CHWs. The outreach team is supposed to provide preventive, curative and

raised the concern that more and better healthcare to the poor may be denied. A relevant concern for India indeed, as it launches the ambitious *Ayushman Bharat* scheme.

Transforming a rural hospital and building a rural training site in Nepal

Dr. Bikash Gauchan is a physician from Nepal, trained in general practice and emergency care and heads the continuing medical education of rural physicians. He works with Possible Health, a not-for-profit organization that runs a network of health care facilities across rural Nepal.

Dr. Gauchan's presentation looked at the challenges of building and expanding a rural hospital at Bayalpata in Nepal. When the first district hospital was taken over as a public-private partnership, there wasn't a single health worker to offer medical help to the rural population in Bayalpata, in Achham district. The hospital will become Nepal's first rural teaching hospital, capable

of serving 75,000 patients per year.

Set on a hilltop



Bayalpata Hospital in rural Nepal also acts as training site

surrounded by terraced slopes of the Seti River valley, the two-hectare master plan includes 14 single family staff houses, an 8-unit dorm, new outpatient, emergency, lab, pharmacy, administration, and inpatient buildings, new water supply and storage, waste water treatment

facilities and network of landscaped terraces and bio-swales designed to

manage monsoon storm water erosion and treat grey water. The Bayalpata regional hospital is working to provide services for communicable and non-communicable diseases, as well as working simultaneously towards quality improvement, while providing services



free of cost, and high-level management and development trainings for their health care workers.

There is a need for such Bayalpata-like high quality rural hospital aimed at training doctors, nurses and other health care professionals in delivering rural health care. This experience also suggests the potential of public-private partnership in setting up such rural hospitals and training sites.

(A point to note: The private partner in this public-private-partnership has a substantial experience of managing rural health care facilities and is driven by a vision of providing high quality health care to marginalized populations.)

Evolution of family practice in Brazil and its implications for India

Dr. Mayara Floss is a Brazilian family doctor, who is a passionate advocate of family medicine and of health care of the marginalized populations. She is founder of rural café, a platform for networking and continued education of rural physicians.

When the Brazilian public health system were being reformed, services for primary care were designed to be highly subsidized. Family practice was designed to counter the commoditization of health, with the firm belief that health is a human right. Dr. Floss spoke of her own experiences as a family doctor, promoting wellness and awareness through home visits to her patients, organising community activities to

help build a rapport with the communities she serves, and promoting good practices such as meditation in the time she spends with them. She noted that these are particularly important for the patients from marginalized families and communities. In her experience, family physicians can influence the access and acceptance of primary health care. But the other major determinant in Brazil is "the zip code" (i.e. where you live), which is a proxy indicator of influence, education and resources, which can determine whether a patient in need gets primary care or not.

In recent years, Dr. Floss told the audience, primary care subsidies have been slashed significantly in

Brazil, impoverishing the communities she serves and making it more difficult for her to perform her duties. In Brazil, 150 health teams in Rio de

family medicine needs to be recognised in India as well and urged the audience to recognise the discipline as distinct from specialist care and



Dr. Gauchan and Dr. Floss interact with respondents from the consultation]

Janeiro, where she comes from, are without doctors after the government's decommissioning them, and their patients, though needing primary care, are essentially back in the long lines of the emergency queues.

Dr. Floss emphasized that

provide recognition in the form of training at the MBBS level to create family physicians. Dr. Floss also urged us to think about ways in which family physicians are not lost to private practice and the commoditization of health.

Global evidence on effectiveness of mid-level providers for primary health care



Dr. Chandrakant Lahariya is the National Professional Officer-Universal Health Coverage, with the World Health Organisation, India Country Office. WHO works for strengthening health systems at the country level, and advocates for ensuring availability of adequately skilled human resources for health.

Dr. Lahariya placed the context of his presentation on the implementation of Universal Health Coverage plan in India, and the importance of access and availability of adequate human resources for its achievement. One of the key strategies for ensuring adequate human resources for health is deployment of mid-level providers.

He used the following definition of a mid-level health workers (MHWs): “Mid-level health workers are those who have received shorter training than physicians, between two to four years, but will perform some of the same tasks as physicians”. These tasks include diagnosing and treating of illnesses or impairments, but not surgical procedures, and providing preventive and

promotive care. Such MHWs include nurses, mid-wives, and non-physician clinicians, such as medical or surgical technicians.

A systematic review commissioned by the



Global Health Workforce Alliance, a few years ago, concluded that there is no difference between the effectiveness of care provided by mid-level health workers in the areas of maternal and child health, and communicable and non-communicable diseases, than that provided by higher level health workers”. However, there were very few studies from low- to middle-income countries, and even those from high-

income countries were not from primary care settings.

Based on available evidence, a WHO report stated that “evidence, although limited, shows that, where mid-level providers are adequately

trained, supported and supervised, they can deliver essential health services with similar quality standards as physicians, and often for a fraction of the cost” (WHO, 2010). Important words here are adequately trained, supported and supervised.

As stated above there is limited evidence for the role of mid-level providers in delivering comprehensive primary

care. However, there is evidence that they are as effective as physicians in selective interventions at primary care level, such as for providing medical abortion, insertion of an Intra Uterine Device, for providing antenatal care, and for detection and management of cardiovascular risk factors.

In summary, Dr. Lahariya argued that to ensure Universal Health Coverage, there will need to expand the role of mid-level workers, who are well-embedded in the system, receive good training, support, recognition and pay. They will also need much greater supervision and regulation.

(In balance, from this evidence, as well as experience from Rajasthan and Chattisgarh, and from South Africa, it appears that a team comprising of a Family/ Generalist physician, non-physicians (nurses or other mid-level providers) and community health workers is best suited to provide good quality primary health care in remote and rural areas.)



Comments by Experts



Dr. Rajeev Sadanandan

Dr. Rajeev Sadanandan is a medical doctor, a policy-maker and a bureaucrat. He has been active in health sector reforms of the state of Kerala. He is currently serving as the Additional Chief Secretary, Kerala.

Dr. Sadanandan, reflecting on presentations made by speakers from different countries said that primary healthcare appears to be a salient characteristic of health systems of more advanced countries. Besides increased [financial] investments, these countries have invested a lot into capacity building of health professionals.

emphasized that a very strong focus needs to be on capacity building of health professionals in India urgently.



He proposed that the primary health care teams dedicated to covering particular geographical areas, should have family physicians backed up by specialists, who can talk to each other through established referral systems. For primary healthcare to be driven by generalists, there must also be strict adherence to protocols, which many doctors in the Indian system struggle to do. Another key component to support training is to affect a curriculum change that reflects the needs of the populations, as well use information-technology.

In addition to strengthening healthcare systems, public health must talk to those establishing water, sanitation and rural or urban development as well, in order to ensure preventative and effective healthcare systems. Citing Brazil as an example, Dr. Sadanandan urged that public health systems can be developed quickly if it has the support of the other systems.



Capacity building of young [medical & nursing] graduates must be combined with the right attitude, through on the ground training, so that they can serve rural communities. Young people serving systems in rural healthcare must be promoted as champions



-Dr. Sadanandan

Fresh graduates from medical schools in India are often unprepared to provide medical care in rural areas. He

Dr. Maharaj K. Bhan

Dr. M.K. Bhan is one of India's leading biomedical scientists, academician and a technocrat in India. He has been instrumental in developing an indigenous rotavirus vaccine. He is currently helping set up a Health System Design Center that aims to bridge the gaps between evidence and health policy in India.



In a nutshell, Dr. Bhan asked the participants to look at the primary health care system as essentially being at the base of a strong overall health care system: "Primary health care is essentially the first three floors of a hundred floor tall building". At the root of this is the concept that primary healthcare prevents illnesses, that it helps people lead happy, successful and productive lives. Such a system is essential for rural as well as urban areas. Information on the different choices (primary, secondary and tertiary) available in healthcare is going to be crucial for how people value primary healthcare.

Approaching the discussion at hand from a scientific point of view, Dr. Bhan spoke of the need to diagnose the disease in people well in advance, at an early stage, which India's model of care is not currently equipped to do- for this purpose, generalists who are part of teams at primary and tertiary care, are likely to be much better equipped.

Currently, the model of care is seen as being unresponsive, particularly by patients.

Mentioning a recent

experience observing a small American hospital, he spoke of how nurse-practitioners can be skilled to provide high quality healthcare, as part of a multi-disciplinary team. The positioning that a mid-level practitioner can



Primary health care is essentially the first three floors of a hundred floor tall building.



-Dr MK Bhan

work in isolation is, according to Dr. Bhan, "a bad concept". The positioning instead should be that mid-level practitioners are part of a healthcare team.

He also highlighted the need for creating a medical education system that strengthens those who work on the periphery, in primary healthcare. "When you create a system that can prepare people on the peripheries you can actually strengthen public health and primary healthcare systems" he asserted.



Dr Paul Worley

Emeritus Professor Paul Worley is Australia's first National Rural Health Commissioner. He has been a determined, effective and passionate advocate for strengthening rural health outcomes across Australia.



These factors affect the status and funding of primary healthcare, which in turn, has huge

Dr. Worley suggested the reasons why healthcare in rural areas remain inadequate throughout the world:

- 50% of rural populations we look to serve with rural primary healthcare has all of its primary care systems designed by the other 50% (by people in urban areas), and
- Despite the science and evidence to support the need for wellness and preventive, pre-emptive self-care and knowledge, people and governments alike ignore these.

“

What are the implications to me for not taking up primary healthcare? Virtually none! I can eat what I want. In some societies, people have built implications for smoking, by imposing taxes, and that has been really effective.

”

-Dr. Worley

implications for health and well-being of populations, especially those in rural areas.

The primary healthcare sector in Australia today is primarily private, but this is the case because it is irretrievably linked to publicly funded health insurance. Dr. Worley emphasized that you cannot have private enterprise in healthcare without public monitoring and support. Dr. Worley also emphasized that private primary care schools do not run into financial deficit. In the end, Dr. Worley argued, it is key that societies start thinking about primary health care, and for the common man to think about “where they think about it’s going to cost me money?”

With this, Dr Worley explained that in future, humans may be able to access their genome, and that medical professionals and primary care professionals in particular can be trained to understand individual genetics. Individual medical conditions can be predicted and worked upon as a part of primary care, which Dr. Worley deemed to be very exciting for the field of primary health care at this point.

Dr. Roger Strasser

Dr. Strasser has spent years helping to build and lead socially accountable rural education programs and medical schools in Australia, and later in Canada. He was invited to set up the first rural medical school in North Ontario, where he currently serves as Dean.



Rural generalists are [evidenced to be] “extremely generous” – they provide a wide variety

In response to a statement that India will have adequate numbers of doctors in next five years, Dr. Strasser reiterated that comprehensive primary healthcare can become “the best, and most efficient form of healthcare, in terms of health outcomes when the health workforce is adequately trained, skilled and supported”. He then contested the popular discourse on shortage of doctors as the key problem for a health system, he said that it is far more important for the system to ensure that the existing health workforce is adequately trained, equipped and supported.

Dr. Strasser further emphasized that primary healthcare needs well trained family practitioners and rural healthcare workers, who are rural “generalists”.

of services, and as a result carry a higher professional responsibility in comparison to specialists.

Dr. Strasser shared his experience of setting up and leading the socially accountable medical school in Northern Ontario (which has implications for India). He shared that the general principle there was to build an education-training pathway to produce rural GPs. The school focussed on recruiting undergraduate students from the rural communities and provide them learning in the rural clinical setting. Following the graduation, they are provided with skills required to be rural general practitioners.

“About 92% of our students have grown up in rural northern Ontario,” Dr. Strasser asserted, while the remaining 8% come from other rural parts of Canada. Of these, 62% of rural graduates chose general practice in rural settings, double that of national average for Canada. About 33% of the graduates are pursuing a combination of specialist and general practices, i.e. practices such as general surgeon. This way, in order to be sub-specialists even, the graduates receive intense training in family and rural practice. About 94% of the graduates continue to serve northern Ontario as a whole, with 33% serving rural communities. The university continues to offer professional development support while serving in rural areas.

“

The problem, pretty much everywhere in the world, is that medical [and nursing] education often trains the students to become specialists as opposed to generalists, and therefore does not equip the practitioners to meet the needs of rural populations.

”

-Dr. Strasser



Dr. Preeti Kumar

Dr. Preeti Kumar is a medical doctor, a trained ophthalmologist and a public health practitioner and academician. She works as a national faculty in Public Health Foundation of India, and also serves as its Vice-President.

Dr. Preeti Kumar emphasized repeatedly about the value of community engagement. In response to a question on key attributes of primary health care services that affect its utilization by the populations it serves, Dr. Kumar iterated: the



service-providers' ability to engage with the communities, availability of skilled and multi-disciplinary team and its integration with secondary or tertiary health services, would be key in ensuring quality primary care response.

Since populations live in different social, demographic and

economic realities, primary health care services, located within the communities and actively engaging with them are important to provide responsive services.

“Successful models come from places where community engagement is high, and the community is where we must start to revamp India's primary and rural healthcare systems”, Dr. Kumar said. She also spoke on the need for having a strong referral system that links the proposed Health &

Wellness Centers (HWCs) and PHCs with secondary and tertiary health services.

“

“[Unless] you have communities as co-producers of health, unless we see them as people first, this model of [rural] primary healthcare may not be successful.

”

-Dr. Preeti Kumar

Recommendations



Based on the evidence and experience shared at the consultation, the following recommendations to strengthen primary health care in India emerged:

Investments in primary health care:

1. The policy commitment to invest 2.5% of GDP on healthcare, and allocation of 70% of this expenditure on primary healthcare should be honoured and tracked closely.
2. States that provide lower allocations on healthcare should be encouraged and supported to provide higher allocations.

Primary Health Care and National Health Protection Scheme (NHPS):

1. People should be entitled for insurance cover under NHPS only when referred by PHCs. Such a gatekeeping arrangement would help in increasing utilization of PHCs and maintain the primacy of primary health care. It would also help in reducing expenditure by reducing unnecessary referrals.
2. NHPS should cover primary health care, in addition to the secondary and tertiary care. This would help in promoting access to primary health care, and also reduce the

overall expenditure on healthcare, by reducing unnecessary referrals, by preventing illnesses, and by treating diseases at an earlier stage.

PHC Team for Health and Wellness:

1. Responsibility (and accountability) for care of a defined population should be entrusted to the entire Primary healthcare (PHC) team. The team would consist of the PHC staff (including the Primary Care Physician), and H & WC staff (consisting of the mid-level provider, ANMs, MPWs and ASHAs). Such a team is likely to provide comprehensive, and continued care.

2. Primary care Physician should be trained in Family Medicine, and Nurses (and other mid-level providers) trained in equivalent generalist, care.
3. Appropriate legal provisions should be

made to ensure that mid-level providers, as part of the PHC teams, are able to provide comprehensive primary healthcare at health and wellness centers.

4. PHC teams should be adequately supported through regular skilling, incentives and supervision. Appropriate technological solutions should be provided to help them deliver quality healthcare.
5. These teams should have functional linkages with higher levels of healthcare.

Creating and retaining healthcare professionals for Rural Primary Healthcare (PHCs and HWCs):

1. **Mandate revision of Undergraduate medical and nursing curriculum to align with rural priorities:** The training of MBBS should be aligned towards producing rural family physicians, and of

nursing graduates, to produce rural primary care nurses.

Currently, the graduate training of nurses and doctors has a heavy urban and tertiary healthcare bias. This would additionally require setting up of community based academic departments.

2. **Allocate a large proportion of postgraduate seats for family-centred care with rural immersion.** In recent years, there has been a huge increase in post-graduate seats (MD/ MS) for medical graduates. Allocating them to Family Medicine, with appropriate training in rural health care settings will bring about the change in focus from tertiary care to primary care, and from urban bias to rural focus. It would require setting up family medicine programs in medical colleges, with strong rural focus.

A similar shift can happen if large numbers of postgraduate seats for nurses are allocated to Community Health Nursing, or Nurse-Practitioner program.

3. **Make newly-set up rural medical colleges responsible for district healthcare.** A large number of state funded medical colleges are being set up in district



Conference participants and speakers at the end of the event



hospitals, most of which are rural. Entrusting them with healthcare of their respective districts, focusing on sourcing rural students, adapting their training curricula to meet local needs and helping them to be placed within the districts would help them fulfil their social accountability. In such colleges, focus should be

on primary and secondary care rather than tertiary care. The current initiative of District Hospital Knowledge Centers (DHKCs) should be aligned towards this goal.

4. Identify and accredit Rural Training Sites for Rural Health Professionals. It would ensure sustained and

high-quality training of large number of professionals required for managing PHCs and health and wellness centers. The staff of these training sites should be accorded a faculty status.

5. Set up an empowered group to define improvements in training, living and working conditions for

rural healthcare professionals. Such a group should be constituted of medical and nursing educationists and practitioners from institutes that have a long experience of training doctors and nurses for rural areas; and representatives of rural physicians and nurses.

List of Participants



1	Dr Anand Zachariah	Professor	CMC Vellore
2	Dr Anita Deodhar	President	Trained Nurses Association of India
3	Dr Anupam Hazra	Public Health Student	IIPH, New Delhi
4	Dr Bhavya Shah	Coordinator, Health Care	Aajeevika Bureau
5	Dr Chandrakant Lahariya	National Professional Officer	WHO India
6	Dr Chandrakant Pandav	Ex-Head, Department of Community Medicine	All India Institute of Medical Sciences
7	Evelyn P Kannan	Secretary-General	Trained Nurses Association of India
8	Dr Devendra Khandait	Deputy Director	Bill & Melinda Gates Foundation
9	Dr Dikshita	Public Health Student	IIPH, New Delhi
10	Dinesh Songara	Program Officer	WISH Foundation
11	Dr Elizabeth Clyma	Country Director, Health	Bill & Melinda Gates Foundation
12	Gayathri Sreedharan	Independent Consultant	
13	Dr Harish Kumar	Senior Program Officer	Norway-India Partnership Initiative
14	Dr Himanshu Bhushan	Senior Adviser	National Health Systems Resource Center
15	Hyjel D'souza	Fellow	Basic Health Care Services
16	Jagdeep Singh	Founder	Karma Health Care
17	Dr Kumkum Srivastava	Director	Antara Foundation
18	Dr Manu Mathur	Associate Professor	Public Health Foundation of India
19	Manoj Malhotra	Board, Chairman	Pyramid Health Care Solutions
20	Manisha Dutta	Executive, Program	Basic Health Care Services
21	Dr MK Bhan	Patron	Society for Applied Studies
22	Dr ML Jain	Ex Director, Public Health,	Government of Rajasthan
23	Dr N Devadasan	Founder	Institute of Public Health
24	Dr Neelam Kler	Chief, Department of Neonatology	Sir Ganga Ram Hospital, New Delhi
25	Dr Neeti Chandra	Founder	VIMAKR Foundation
26	Dr Prasanth Subramanian	Senior Advisor	National Health Systems Resource Center
27	Dr Pavitra Mohan	Secretary	Basic Health Care Services
28	Patralekha Chatterjee	Journalist	Independent/ Lancet
29	Dr Pratyush Mishra	Secretary	WONCA-Rural South Asia
30	Dr Preeti Kumar	Vice-President	Public Health Foundation of India
31	Dr Raman Kumar	President	Academy of Family Physicians of India
32	Dr Raj Mohan Panda	Senior Specialist	George Institute for Global Health
33	Dr Rajani Ved	Executive Director	National Health Systems Resource Center
34	Dr Rajeev Sadanandan	Additional Chief Secretary	Government of Kerala
35	Dr Rajesh Kumar	Dean & Head	PGIMER, Chandigarh
36	Rajiv Ahuja	Health Economist	Independent
37	Rajiv Khandelwal	Executive Director	Aajeevika Bureau
38	Dr Ramani Atkuri	Public health Expert	Independent
39	Dr Ratika Bhandari	Public Health Student	IIPH, New Delhi
40	Dr Sabahat Azim	Founder	Glocal Health Systems Private limited



41. Samir Garg	Programme Coordinator	State Health Systems Resource Center
42. Dr Sanjana B Mohan	Director	Basic Health Care Services
43. Dr Selva Titus Chacko	Dean, College of Nursing	CMC Vellore
44. Dr Subbiah Elango	Ex-Director, Public Health,	Government of Tamil Nadu
45. Sutapa Deb	TV Journalist	NDTV
46. Dr Tarun Choudhary	Scientist	Society for Applied Studies
47. Dr Vinaya Pendse	Ex-Head, Department of Obstetrics & Gynaecology	RNT Medical College, Udaipur
48. Dr Vinod K Paul	Member	Niti Ayog

(Besides these invited participants, a large numbers delegates of World Rural Health Conference participated in the consultation)

Edited by BHS

Basic HealthCare Services Trust
39, Krishna Colony, Bedla Road
Udaipur, India
Email: info@bhs.org.in
Website: www.bhs.org.in

Published by AFPI

Academy of Family Physicians of India
049, Crema Tower, Mahagun Mascot,
Crossing Republik, Ghaziabad,
UP 201016, India
Email: afpionline@live.com
Website: www.afpionline.com