

From NHM to NPCDCS: Epidemiological Transition and Need for a National Program for Diabetes in India

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Rec date: May 09, 2016; Acc date: Jun 10, 2016; Pub date: Jun 16, 2016

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Abstract

It is time we understand the need for disease/s specific programs and not just theoretical frameworks like the National Health Mission (NHM) or National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke, through mixing of programs. Off course, each of these programs can benefit from the strengths of other programs, for example, a program on diabetes can benefit from a fully operational Integrated disease surveillance program (IDSP) or vice versa. A disease specific program is also important because the numbers which diseases like Diabetes or Cardiovascular diseases throw up individually is huge. Importantly these diseases are and will continue to be major contributors of mortality.

Keywords: NHM; NPCDCS; National program; Diabetes

Introduction

The one idea that has consistently dominated public health policy guidelines initiated by the government of India to improve the health of people of India is implementation of National Health Programmes. National Health Programmes as an initiative have been launched for the control/eradication of the communicable diseases, improvement in environmental sanitation, nutrition, population control etc. [1].

The government of India recognizing the importance of health in economic and social development launched the National Health Mission (NHM). The mission is aimed at carrying out necessary architectural correction in the basic health care delivery system. The mission is expected to act as the instrument of multiple vertical health programmes along with their funds at the district level. However, the main goal of the mission is to improve the availability and access to quality health care by people, especially for those residing in rural areas, the poor, women and children. Therefore, it appears that every other area of health and disease seems an addition to this basic framework. The idea of integration of other national programs in NHM, therefore seems to be purely unintentional.

The concept of NHM per se, may have been worked and reworked many times over before finalizing, but it seems to have its limitations. For one, NHM seems to be too large a framework to work within and fulfill the basic commitment of providing quality preventive and promotive care. Secondly, the idea of integration manifest in it may have many takers, but we for one differ from its capacity to deal with the sheer numbers that our health institutions throw up for the purpose of management of health problems. Importantly, the limitation of NHM also lies in its focus and approach to health and disease.

Before we move on to delve on the capacity of NHM to deal with changing scenario in health and disease, let's have a look at this:

In the next two decades there will be dramatic changes and transitions in the world's health needs, as a result of epidemiological transition [2]. At present, lifestyle and behavior are linked to 20-25% of the global burden of disease but this is rapidly increasing in poorer countries.

In the developing regions, where four-fifths of the planet's people live, non-communicable diseases such as depression and heart disease, as well as road traffic deaths, are fast replacing the traditional enemies such as infectious diseases and malnutrition, as the leading causes of disability and premature death [2].

According to WHO estimates by the year 2020, non-communicable diseases are expected to account for seven out of every ten deaths in the developing regions, compared with less than half today. Injuries, both unintentional and intentional, are also growing in importance and by 2020 could rival infectious diseases as a source of ill-health [2].

The general opinion in public health has been that, as countries develop; non-communicable diseases are replaced by communicable diseases as the main source of ill-health. The current evidence however, points to the fact that the poorest in developing countries face a triple burden of communicable disease, non-communicable disease and socio-behavioral illness and India is no exception to this.

The global burden of disease methodology shows that the epidemiological transition is already well advanced in countries across the globe. In this context the WHO, therefore, suggests that public health policy in poor and developing countries, with its traditional emphasis on infectious disease, will need to adapt [2].

India seems to have responded in the earnest to the suggestions of the WHO and probably as a wakeup call to this, the Cabinet Committee on Economic Affairs on 8th July 2010 approved the launch of the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) for implementation of its various components during the remaining period of 11th Five year plan (i.e. 2010-11 and 2011-12) [3]. With the successful implementation of the programme, it was expected to achieve behavior change in the community to adopt healthy life styles

including dietary patterns, enhanced physical activity and reduced intake of tobacco and alcohol resulting in overall reduction in the risk factors of common Non-Communicable Diseases (NCDs) in the community. The NPCDCS aimed at integration of non-communicable disease (NCD) interventions with the NHM framework for optimization of scarce resources and provision of seamless services to the end user/patients as also for ensuring long term sustainability of interventions [3]. Thus, the institutionalization of NPCDCS at district level within the District Health Society, sharing administrative and financial structure of NHM became a crucial programme strategy for NPCDCS. The NCD cell at various levels was to ensure implementation and supervision of the programme activities related to health promotion, early diagnosis, treatment and referral, and further facilitates partnership with laboratories for early diagnosis in the private sector.

However, it has been six years since the initiative for tackling non-communicable diseases has been taken and yet there are no measurable gains. Even the institutionalization of the program at the district and sub-district level has not been completed probably because of its integration with a framework (NHM) which does not look to diabetes, stroke and cancer as its focus area. It seems that the idea of integrating NPCDCS with NHM is a farfetched idea, lacking practical understanding of health situation in India. Further, a look at NPCDCS also points to us the limitations within the program itself. For example, the facilities and staff required for cancer is entirely different from the one required for diabetes or cardiovascular diseases.

It is time we understand the need for disease/s specific programs and not just theoretical frameworks through mixing of programs. Off course, each of these programs can benefit from the strengths of other programs, for example, a program on diabetes can benefit from a fully operational Integrated disease surveillance program (IDSP) or vice versa. A disease specific program is also important because the numbers which diseases like Diabetes or Cardiovascular diseases throw up individually is huge. Importantly these diseases are and will continue to be major contributors of mortality.

If we take a look at Diabetes scene in India, the following facts emerge:

- An estimated 77.2 million Indians have prediabetes, a condition that can lead to type 2 diabetes and heart attack and stroke if not addressed [4].
- An estimated 62.4 million Indians have diabetes [4].
- According to the Diabetes Atlas of 2009, there were 50.8 million people with diabetes in India. In just two years, this figure has gone up by 12 million. Obviously, diabetes in India is progressing exponentially. Also, we see that it has shifted to the 25-34 years age group [5].

Keeping the above stated facts discussion preceding that in view and the discussion, a national programme exclusively dedicated to prevention, control and management of diabetes in India is the need of the hour. This will include prevention control and management of obesity and prevention control and management of post-diabetes complications.

Within the National program for Diabetes, the basic strategy for prevention and control of diabetes in India needs to be based on effective screening. It is known that 66% of Indian diabetics are not diagnosed as compared to 50% in Europe and 33% in USA [6]. Universal screening as a strategy may neither be feasible nor practical given the vast numbers we have to deal with. Therefore opportunistic screening seems to be the logical process of screening.

Opportunistic screening can be initiated through a Diabetes Prevention and Control Card (Card shown below) which can be provided to every individual attending a health facility. The card will serve both as an information sheet (thereby generating awareness) as well as a screening tool. This will function similar to the functioning of JACHA BACHA RAKSHA CARD used in immunization. The key elements of this card will the information which has been based on Indian Diabetes risk score [6].

Diabetes Prevention and Control Card (for Screening)

Of (Name) S/D/W of Age.....
R/O.....

Measurements									
Sl. No	Date of Visit	Height (mts)	Weight (kgs)	Waist Circumference	BP Systolic	BP Diastolic	Fasting glucose	Blood	Remarks
1									
2									
3									
4									
5									
6									
7									
8									

Please keep this card with you and show it to the ANM/HA/Doctor and get their advice every time you visit a health facility.

The one concern that will probably remain is the sustainability of such a programme. Herein the government needs to step in and plan and involve other partners for sustainability. We have identified a few areas that can be considered for creating a sustainable national programme to prevent diabetes. They are: effective partnerships and coordination between government, non-government and private partners; technological advances; political commitment for funds or alternatively a business model that ensures that the programme can be paid for; Awareness to encourage public participation, and testing and development of the models to expand the reach of the programme (Table 1).

Particulars	Risk Score
Age [years]	
<35	0
35 - 49	20
≥50	30
Abdominal obesity	
Waist<80 cm [female], <90 [male]	0
Waist 80 – 89 cm, 90 – 99 cm	10
Waist 90 cm, 100 cm	20
Physical activity	
Exercise [regular] + strenuous work	0
Exercise [regular] or strenuous work	20
No exercise and sedentary work	30
Family history	
No family history	0
Either parent	10
Both parents	20
Minimum score	0
Maximum score	100

Table 1: Information sheet.

The programme needs to be developed within existing health delivery system, because that will ensure sustainability in the first place and a programme developed outside the existing system will be unaffordable. Probably the best way to prevent diabetes is to create an environment in which healthy eating and physical activity are the norm, which clearly depends on many groups—“the whole of society and whole of government” approach advocated by WHO. This is important because even if focusing on individuals at high risk, many different organizations are needed for this as well. What is required is training, quality assurance, and a place to provide intervention, and this is only possible if we are able to fully utilize the existing health system. A successful Programme will depend on raising awareness of diabetes, as it is important for diabetes to be understood by the whole community, not just those affected by diabetes.

- The main goals of the National Programme on diabetes will be:
- To increase community awareness of diabetes as a medical condition.

- To increase awareness about the risk for diabetes.
- To increase awareness about the fact that diabetes can be prevented.
- To improve access to information, support and care for diabetes.

The working guidelines for the programme can listed as under Table 2:

Intervention	Health Facility	Package of Services
Awareness	Sub Centre, PHC, CHC, District Hospital, Tertiary care Centre	1. Raising awareness on the seriousness of all types of diabetes. 2. Opportunistic screening 3. Referral of positive cases to a health facility where doctor is available.
Prevention Promotion	Sub Centre, PHC,CHC	1. Raising awareness on developing healthier individuals and communities, especially children. 2. Raising awareness on promoting physical activity, healthy eating and built-environments that encourage activity.
Detection	Sub Centre, PHC, CHC, District Hospital, Tertiary care Centre	1. Opportunistic Screening for blood glucose by strip method after using IDRS at Sub centre level. 2. Opportunistic screening using B.P apparatus and estimation of blood glucose by strip method after using IDRS followed up by other lab investigations: Blood Sugar, lipid profile, Ultrasound (CHC), 3. Blood Sugar, lipid profile, Kidney Function Test (KFT), Ultrasound (CHC),ECG (district Hospital)
Management	PHC, CHC, District Hospital, Tertiary care Centre	1.Management of diabetes –OPD base(PHC) 2. Management of diabetes –OPD/IPD base (CHC/ District Hospital) 3. Comprehensive diabetes care including diagnosis, treatment of complications, after care, and Rehabilitation. (Tertiary care Centre)
Research	Tertiary care Centre	1. Greater priority to diabetes research-public health approach

Table 2: Working guidelines for the programme.

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