

Public Health Manpower- An alternative model

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Introduction:

The “draw backs of the public Health System” of India was aptly documented In the Health & Family welfare section of the Eleventh five year plan document. It mentions that our health programs are based on the “fragmented Disease specific approach”. It mentions “the inability of the systems to mobilize action ion areas of safe water, sanitation & hygiene and nutrition”. All are key determinants of health. It also mentions about the “inadequate provision of human resources”. The observations are of paramount public health importance and needs immediate attention of the important stake holders in government and public at large. Accordingly to address the paramount public health needs National Rural Health Mission (NRHM) was launched. NRHM aims to address the health needs of the community according to the current public health knowledge and practices. It speaks of a comprehensive package of services viz. promotive, preventive, curative and rehabilitative service to be delivered to the community through a process of Inter-sectoral co ordination with other service departments and active community participation. It speaks of convergence of health and health related services addressing the needs of the Social determinants of health and delivery of the same package with the active participation of Panchyati Raj Institution for its sustainability. The program is being universalized and has produced good results as per the mid course review report. But till date we have not addressed one of the key issue’s that is of “inadequate human resources”.

Personal Care Service & Public Health Services:

Our health service delivery structure is based on “Regionalized graded service” concept. Two major types of services one **personal care** and the other **public Health** are being provided through the primary health care institution viz. Sub Centre, PHC, CHC. Personal Care focuses on individuals viz. case, beneficiaries, target individuals, family etc under different programs. There focus is on individual beneficiaries and providing promotive, preventive, curative and other services. On the other hand the Public package consists of water and environmental sanitation, food hygiene & sanitation, epidemic disease control, hygiene in working places, School health, Health Promotion, Non Communicable disease Control, (now included in NRHM) Disaster management or any other public health emergency. At present the workers responsible for delivering both personal care and public health are Health Worker Female (HW-F) & Health Worker Male (HW-M), supervised by Health Assistant female (HA-F) and Health Assistant Male (HA-M). Now if we analyze the work under **Personal Care services** we shall observe that the major activity in each of the health program is to identify the beneficiaries in the families hold them and provide specific services. As it is an enormous task for the existing manpower like HWF & HWM, the health planner judiciously thought about a link worker between the community and the HW(F) & HW(M) and accordingly “Anganwadi Worker” in ICDS scheme and “ASHA” in NRHM are inducted. Both of the cadres have marginally improved the universal coverage of personal health care. HW(F) & HW (M) are responsible to implement a dozen of National health program which is mostly focused on delivery of personal care like case detection and treatment & follow up and as well as detection of beneficiaries and providing individual care. The **public health services** listed earlier becomes adjunct to the personal care except in emergency situation like epidemics, pandemics, natural disaster natural or man made, where all the team

members work. Routine public health activities/services are relegated to the back till it cumulates to an emergency situation.

Human Resources & Quality:

The number of Health worker is based on 2001 census and that is the reason that one worker on an average has to look after a large area. The Rural Health Statistics Bulletin 2008 which gives us information till 2008 states that there is a deficiency of 12.4% in the category HW (F). The deficiency in case of HW (M) is 54.3%. Though it seems that HW(F) is more or less adequate but one has to review it in relation to the deficiency of General Nurse Midwife as it is a practice that if there is a dearth of GNM in Hospitals the HW(F) becomes the substitute. And the deficiency of GNM is 33.7%. The deficiency of HA (F) is 27.6% and HA (M) is 37.6%. Another type under the erstwhile Family Welfare Program is Block Extension Educator. The deficiency in this category is of the order of 38.5%. On the above context it is observed that there is a substantial deficiency in all the existing cadres and that too in proportion to 2001 census population norms. The other aspect is the quality of the health worker. It solely depends on the type of induction training and as well as continued on the job training by a well trained and experienced supervisor. We have well organized course for HW (F) funded by the ministry of Health & family welfare, GOI, which equips them well to provide personal care service. We do have a syllabus for HW (M) course but in most of the states the incumbents under different programs do not undergo any training and are designated as MHW. And besides this there are a great number of vacancies. The State Health Institutes are supposed to provide induction training but unfortunately it is not routinely organized. The same is true with the promotional training of HA (F) and HA (M). In these categories also the HA (F) is a bit better than HA (M) as in many of the states they have undertaken a structured training before promoting the HA (F). But in many it is not so. One look at the manpower situation will reveal the actual situation. Majority of the states do not undertake any promotional training for HA (M). So the training and the continued training for improving the quality of work suffers. The Block extension Educators are a key worker for undertaking BCC and other Health promotional work but majority of the BEE are graduates of science or humanities and not trained in Health Education or any other course. The existing training strategy under different program is also to be blamed. These are "stand alone" training package run in a "stand alone" manner for each specific group of worker causing wastage of time and disrupting the continuity of training.

Need for a Change:

The existing workforce is aimed to provide personal care services as well as public health services. But the nature and content of services are different. Most of our manpower is trained to provide personal care services but are not properly trained to meet the current public Health needs. India is passing through a period of epidemiological transition and the service needs can not be effectively met with the existing work force. The National Health policy document 2002 and other recommendation by different committees emphasized the need to strengthen the public health workforce. Accordingly many of the Health institutes and in particular the newly formed Public Health Foundation of India have rightly started the Masters in Public Health Course to stream line the Public health services in the country which is still in deplorable condition. In a few years time we may have substantial number of qualified health managers for managing the health services/programs both in public & private sector. But delivering public health service is solely dependent on a trained manager it requires a well qualified and competent team of workers who are not burdened with providing personal care. Unfortunately at present we do not have any such cadre or any course of study to prepare such manpower.

Proposed Change:

Keeping in view the requirements of a manager for providing the public health services in a community or an industrial setting a course of Bachelor in Public Health is conceived by the Indian Academy of Public Health. The members have deliberated on the job responsibility of such a worker and finally agreed that at the end of the training he will be working in a PHC as Health Inspector and assist the medical officer to plan organize and implement all the personal Health care Program as well as public Health services. (Details in next page) The post of Block Health Educator may be converted to Block Health Inspector and similarly like District Public Health Nurse a post of District Public Health Inspector may be created. The promotion to the post will be only possible if the incumbent block health inspector undertakes a MPH course. Accordingly in the state level also we may create a post for non medical public health personnel. The course will be a three years graduate course with a provision of a major stream (Honors Course) in Environmental Science, Behavioral Sciences, Epidemiology or Occupational health & Nutrition. The Major course (Honors) will be 4 years. Both the course will have one year internship program. While formulating the course due attention is paid so that it is a competence based and not a curriculum based course.

Annexure- 1**Course of Bachelor in Public Health (BSPH)****Professional Responsibility of a Graduate in Public Health**

- I. Monitor Health Status to Identify community Health problems..
- II. Able to monitor the Physical, chemical & Biological environment like water, sanitation and Air quality in the community and work places and are able inform the authority for intervention and also be able to carry out any available intervention..
- III. Able to monitor food hygiene both prepared and raw food, public eating places in the community and able to suggest healthy measures.
- IV. Inform Educate and empower people about health issues, Capable of providing behavior change education to the individuals, family and community for bringing out life style and behavioral changes.
- V. Mobilize community partnership to identify and solve health problems.
- VI. Diagnose & investigate community health problem.
- VII. Organize & implement Health promotional, protective, preventive and rehabilitative services/program in the area he serves.

- VIII. Participate in local planning & implementing & monitoring of all National public health programs adapting to the need and resources of the community along with the Medical & health officer.
- IX. Enforce laws & regulations that protect health & ensure safety.
- X. Identify common community health emergencies/Disasters and initiate action and seek for further help.
- XI. Able to provide primary health care for common morbidities.
- XII. Conduct research for new insights and innovative solutions to health problem

Annexure II

Bachelors of Science Public Health

Highlights of the Program

- Level: Graduate; College.
- Professional Field: Health Sciences.
- Profession: Public Health.
- Degree upon Graduation: Bachelors in Public Health, B.P.H.
- Length of Training: 3 years including 1 year for honors course.
- Internship 1 year for both.
- Training Format: Class room and field based training.
- Target Candidates: 10+2 years of schooling from science stream having (Biology, Physics, Chemistry).
- Training Facilities: School of Public Health.
- Place of employment
 After Graduation: Health departments of the state & Centre, in Primary Health centre or Urban Health centre, In organized & unorganized sector both in public and private org. Providing public health services to the employees and Their family, community and in teaching institution like Universities, Colleges, and Research organization.

- Post Graduate Opportunities: M.P.H.; Ph.D, Dr. Sc.

Annexure III
Bachelor in Science Public Health

Allotted Schedule:

Number of Years = 3years+6 months elective
 Total number of study & Examination weeks = 120+20 weeks
 Total Number of Blocks: = 150

Srl. No	Courses	Educational Blocks			
		Total	Theory	Practical Field visits	Percentage
1	A. Foundation Course: (pre public Health) 1. Language including communication, 2. Human Biology including Health & Disease concept 3.Cultural Anthropology + Methods of study 4.Environmental science + entomology: 5. Sociology: Concepts, Structure, control, Dynamics + methods of study 6.Psychology its effect on personality, human behavior, attitude & learning & Social Psychology, including Interpersonal & group behavior 7. Statistics, Computer skills 8.Public administration	02 10 03 03 03 03 03 04 02	02 09 02 02 02 02 02 01 02	01 01 01 01 01 01 03	
	Total	30	22	08	
2	Specialized education (Include facility based and specialized courses) Compulsory				
	B. 1. Fundamental of Public Health & Public Health. Practice 2. Epidemiology.	60 30	30 20	30 10	
	Elective (Special) Research Methodology/ Environmental health Nutritional Health Health promotion	30	20	10	
	Graduation Exams				
3	Total	150			

1 unit (credit hours) is equivalent to 30 sessions of lecture 10 sessions of practical or 4 session of field work in the community. Elective will be on Nutrition, Health promotion, Environmental sanitation, Research Methodology, RCH, Communicable disease control.

Annexure IV. Foundation Course

Course Name	Units	Course Code	Jan Semester	July semester
Foundation Course (30 units)				
Language including communication skills, literature related to Health & History of Public Health Public health placed in historical and modern perspective.	2	BFPH 001	2	
Human Biology including Health & disease Concept	10	BFPH 002	5	5
Cultural Anthropology + Methods of study in Cultural Anthropology its scope in understanding Health & Disease.	3	BFPH003	2	1
Environmental science + entomology and it effect on Health & Disease, & its role in Health & Disease.	3	BFPH004		3
Sociology: organization, Structure, Socialization, Social control, Methods of Study in Sociology. Social Pathology. & its scope in understanding Health & Disease.	3	BFPH 005	2	1
Psychology its effect on personality, human behavior, attitude & learning & Social Psychology, including Interpersonal & group behavior. Scope of Psychology & Social Psychology in understanding Health & Disease. Study Methods;	3	BFPH 006		3
Basic Statistics and computer skills	4	BFPH 007	4	
Public Administration including structure, functioning, roles & responsibilities of different service provider's public/private; professional's ethical consideration.	2	BFPH 008		2
Total	30		15	15

Course on Epidemiology

Srl. No	Courses on Epidemiology	Educational Blocks			
		Total	Theory	Practical Field visits	Course Code
1	i) History, philosophy & uses of epidemiology; ii) Descriptive Epidemiology: a)Conditions, Frequency & severity; b)Data regarding Disease/injuries; c) Patterns of disease/injuries; Vital Statistics, Sources of Data for epidemiology, Classification of Disease & certification of Cause of Death	3	2	1	BEPH 009
2	Association & Causation: Estimation; Inference; Bias, confounding & adjustment, Causation	1	1		BEPH 010
3	Analytical Epidemiology: Basic epidemiologic Study designs & their application. Experimental studies- Randomized Clinical trials & community trials.	4	2	2	BEPH 011
4	Monitoring Disease & health status ; Surveillance, Designing of surveillance system, Investigating Changes in occurrence, Investigating Alleged clusters, Assessing longer term health trends- Registries, Assessing Health Status of a community, Summarizing Health Status, Measuring & monitoring Health inequalities & auditing inequity.	5	3	2	BEPH012
5	Evidence-Based Public Health and Evidence-Based Recommendations: Harm, benefit, and cost analyses — Evidence-based decision analysis regarding risks, benefits, and cost-effectiveness of interventions. Intervention efficacy and effectiveness — Evidence-based analyses of interventions' capacity for producing desired results and measurement of the accuracy or success of prevention and control efforts for diseases or injuries.	5	3	2	BEPH013
6	Applications to Policy and Basic and Clinical Sciences: Public health policy — Application of results from investigations and analyses to influence policymaking. Special epidemiologic applications — Molecular and genetic epidemiology, environmental and occupational health and safety, unintentional injury and violence prevention, and behavioral sciences.	2	1	1	BEPH014
7	Applied Biostatistics -1 Hypothesis testing & linear regression	5	3	2	BEPH 015
8	Applied Biostatistics-2: use of SPSS & Epi -info and other packages	5	3	2	BEPH 016
	Total	30	18	12	

Course on Public Health & Public Health Practice

Srl. No	Courses on Public Health & Public Health Practice	Educational Blocks			
		Total	Theory	Practical Field visits	Course Code
1	Context & scope of public health, including. Public health placed in historical and modern perspective. Public Health Interdisciplinary concept, Concepts on Health Development, Measurements in Health; Indicators of Health,	3	2	1	BPPH015
2	Essentials of Demography, : Demographic cycle, Demographic Structure, Trends in different regions of the world, developing and developed nations, in India, Fertility indicators and trend.	2	1	1	BPPH016
3	Application of Natural History & Levels of prevention in the study of different morbidity and formulating evidence based intervention.	1	1		BPPH017
4	Nutrition & food Hygiene	7	5	2	BPPH018
5	Environmental Health Introduction to environmental and occupational health issues and their implication for individual & population health	7	5	2	BPPH019
6	Behavior Change theory & practice: Theoretical approaches to health behavior adherence and compliance, including health enhancing behavior and sustaining health behavior over time. (with individual assignment)	2	1	1	BPPH020
7	Public Health Education & Promotion: Principles & practice of Health education & Health Communication as a tool in public health .	2	1	1	BPPH 021
8	Health Care System: Organization, Structure, Relationship, Concept of primary Health care, regionalization of care and Graded referral, Compare with other systems of world/USA/Aus	3	2	1	BPPH 022
9	Communicable Disease Control & prevention and related National programs	8	6	2	BPPH023
10	Non communicable disease control & prevention & related National Program	6	4	2	BPPH024
11	Public Health needs of special groups, Mother & Child, (RCH) Adolescents (School Health); Geriatrics; Physically & mentally Challenged, Prisons, temporary settlements.	8	6	2	BPPH 024
12	Health Care Management: Basic concepts & issues within the administration , health care financing & policy of health care, Usages of modern management techniques in health care	3	2	1	BPPH025
13	Program Planning & Evaluation: principles in context to implementation of the National health program.	3	2	1	BPPH026
14	Quality in Health care, Introduction to Health informatics, Health economics, using guidance, protocol, medical audit, governance, evaluating technologies, people's satisfaction. TQM	3	2	1	BPPH027
15.	Research Methodology	2	1	1	BPPH028
	Total	60	41	19	BPPH 029