

## Need Assessment on Short Training in Public Health among the Primary Care Physician

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**Abstract:** *Non-communicable diseases (NCDs) are considered a major public health concern worldwide including Bangladesh. Further, Bangladesh is also experiencing double burden of disease from NCD and communicable disease. Trends of NCD are escalating every year. Since there is no curative treatment for NCDs, but it can easily prevent or controlled if proper trained medical practitioners are in place. About two thirds of registered physicians in Bangladesh are private medical practitioners who have very limited access to any training in Public Health. The objective of this study is to determine the need of training in Public Health. A cross-sectional survey was conducted among 79 private medical practitioners (PMP) by using semi-structured questionnaire to collect data on Public Health training need and their body of knowledge in Public Health education and practice. About 52% of PMPs were young adult (>30 yrs) and male-female ratio was 5:1. While measuring their knowledge in Public Health only 36.7% participants secured 3rd, 55.7% secured 2nd and rest 7.6% secured 1st quartile. The need of training in Public Health for health care provider is acknowledged by many countries including India. Ensure good health cannot be promoted only by the Government agencies and the role of private medical practitioner is vital. Resource prone country like Bangladesh has to be re-designing the course curriculum at post-graduate level especially for those who are serving as gate keeper in Health Care System.*

**Keywords:** *Need Assessment, Short Training, Primary Care Physician, Noncommunicable Diseases*

### Introduction

Currently, epidemics of non-communicable diseases (NCD) are emerging or accelerating in most developing countries. In many developing countries in Asia and Africa infectious diseases and malnutrition receding as leading contributors to death and disability; simultaneously cardiovascular diseases (CVDs), cancers, diabetes, chronic lung disease, and other chronic diseases are becoming major contributors to the burden of disease<sup>1</sup>. Bangladesh is also experiencing this epidemiological transition, which positions NCDs as a major public health challenge of growing magnitude in the present century. The rapid increase in the number of people suffering from NCDs presents one of the biggest challenges to the healthcare systems worldwide. Medical professionals play a critical role in the prevention and control of NCDs including injuries but current under- and postgraduate medical curriculum in Bangladesh is reported to not cover prevention and control of NCDs adequately enough. Furthermore, the environment of public health workforce has been changed dramatically throughout the

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world due to a wide range of transitions in technological, socio-political and economic issues. Three dominant trends have been identified so far which have important implication on the educational system, academic performances and training skills in the field of public health. Firstly, an increasing demand for skilled professional in healthcare services. Secondly, an ever-growing need in the labor market for a more diverse workforce. Thirdly, preparation of education and training programs for future health workers for those whose jobs must cover an expanding scientific and methodological domain<sup>2</sup>. In Bangladesh maternal mortality has decreased by 75% since 1980, infant mortality has more than halved since 1990, and life expectancy has risen to 68 +years, higher than neighboring countries like India and Pakistan<sup>3</sup>. In spite of these success stories in health sectors of Bangladesh (e.g., reduction of maternal and infant mortality and increase of life expectancy at birth) the country still faces huge challenges to combat with double burden of diseases mainly with NCDs where in-time preventive approach remains the only plausible solution.

Unless a required number of trained workforces are deployed in this field, the country will not cash the demographic dividend (50% of population belong to 18-35 years age group) that remain the country's main work force. The aging of population in Bangladesh (aged 60 year and over), which is projected to increase to 40.5 million (19% of the total population) by 2050, increases the likelihood that individuals will experience multiple chronic conditions<sup>4</sup>. In addition, dependency rate for elderly population is raising in Bangladesh with their health problems and unfortunately no health care services are available for them. These elderly people mainly suffer from NCDs requiring routine health checkups to screen for diseases like hypertension and diabetes. NCD Policy Brief- Bangladesh (2011) indicates that primary cause of death in Bangladesh is cardiovascular disease (e.g., ischemic heart disease) where hypertension is the main culprit<sup>5</sup>.

In Bangladesh, there are about 65, 000 registered physicians in the whole country and majority (58%) physicians are working in the private sector<sup>6</sup>. Most of the private sector physicians are self-employed as private practitioner or GP. There is no lucrative educational program available to prepare need-based manpower in Public Health sector in Bangladesh. An innovative education program for primary care physician with concentration to Public Health sub-specialty is to be developed to address the healthcare need of Bangladeshi people. The newly designed education program will equip all categories of medical practitioners to face the challenges of modern era in patient management and cure. Before designing any new education program, it is essential to conduct a survey to assess the need of that. Thus, the objective of the study was to assess the need of public health education amongst the Family Physicians.

### **Material and Methods**

We conducted a cross-sectional designed short-term survey to determine the training need for private medical practitioners on Public Health Education specifically focusing on Non-communicable disease. Data was collected on the background knowledge of 94 participants on Public Health education and practice among the registered medical graduates and who are also member of either Bangladesh Academy of Family Physician or Bangladesh Private Medical Practitioners' Association by using self-introduced semi-structured questionnaire. The questionnaire has two main sections: Section A & B. In Section A participant's socio-demographic data was collected and Section B contained questions to assess their view on Public Health training. Data were then analyzed by using SPSS software version 21. For descriptive data, frequency, mean and standard deviation were calculated. Ethical issues of the participants addressed properly like confidentiality, informed consent and ethical approval from the authority.

**Results:**

Ninety-four private medical practitioners were approached to participate in the survey on training needs in Public Health, 81 of them were agreed to participate (overall response rate was 86.1 percent). Of these 81, two questionnaires had to be discarded due to incomplete data. Finally, seventy-nine valid questionnaires from the need-based survey on Public Health Training were analyzed.

**Table 1: Socio demographic profiles of the participants (n=79)**

Variables	Frequency	Percentage	Mean $\pm$ SD
<b>Age (years)</b>			35.1 $\pm$ 12.3
up to 30	41	51.9	
31-40	20	23.3	
41-50	9	11.4	
51-60	3	3.8	
61- 70	5	6.3	
71 and above	1	1.3	
<b>Gender</b>			
Male	66	83.5	
Female	13	16.5	
<b>Education attainment</b>			
MBBS	60	75.9	
MPH	10	12.7	
Diplomas(FCGP, FMD)	6	7.6	
Others	3	3.8	
<b>Practice location</b>			
Urban	58	73.4	
Semi-urban	15	19.0	
Rural	6	7.6	
<b>Duration of practice (years)</b>			10.5 $\pm$ 12.4
Below 10	55	69.6	
11-20	9	11.4	
21-30	8	10.1	
31-40	2	2.5	
41 and above	5	6.3	

About 52 percent of participants were young adults (<30 years) conversely only 11.4 percent of participants were >50 years of age. Male and female ratio is 5:1. About 76 percent of participants had no post-graduate qualification since they graduated. Majorities (73.4%) of participants were practicing in urban areas and rests were in semi-urban (19.0%) and rural (7.6%) areas. Majority (70.0%) of them were practicing for short duration (>10 years) of time (Table 1).

**Table 2: Importance of Public Health knowledge and skills in practice**

Importance of Public Health knowledge	Frequency	Percentage
Very important	56	70.9
Important	21	26.6
Not much important	2	2.5
Total	79	100.0

While asking about the importance of Public Health knowledge in their practice; majority (70.9%) of them recognized it as very important. Only a few (2.5%) opined it as not such important (Table 2).

**Table 3: Public Health training in recent year and Area of training need**

Variables	Frequency	Percentage
<b>Public Health training</b>		
Yes	8	10.1
No	71	89.9
<b>Area of Training</b>		
Communicable disease	13	16.5
Non-communicable disease	18	22.8
Both	46	58.2
Others	2	2.5
Total	79	100.0

Only 10.1% of participants had recent training in Public Health. Rest had no such training since they graduated. Majority (58.2%) of participants selected both communicable and non-communicable disease as their training needs and 22.8% of participant selected training need in NCD and only few (2.5%) selected others like emergency medicine (Table 3).

**Table 4: Body of Knowledge on Non-communicable disease (n= 79)**

Domain of knowledge	Correct answer (s)	Percentage
Major NCD	54	68.4
NCD screening	3	3.8
Epidemiology of NCD	7	8.9
Risk factors of NCD	36	45.6
NCD surveillance	20	25.3
NCD prevention	4	5.1

Twenty-four questions were asked to assess the body of knowledge on NCD of the participants to identify domain area of training on Public Health. About sixty-nine percent of participant correctly identified major NCD and 45.6% of them correctly answered all questions of NCD risk factors. Conversely only one quarter of participants could identify correctly the utility of surveillance as a public health approach for disease prevention and only a few (3.8 % and 5.1%) participants correctly answered all questions in NCD screening and NCD prevention respectively. Finally, the participants reported a strong need for training in the area of NCD prevention more specifically on Epidemiology of NCD diseases, NCD risk estimation, and NCD screening and behavioral modification approach to NCD prevention (table 4).

**Table 5: Total knowledge score of the respondents (n=79)**

Knowledge score	Frequency	Percentage
1-6	6	7.6
7-12	44	55.7
13-18	29	36.7
Total	79	100.0

Total knowledge scores were then calculated and only 36.7% of participants secured 3rd quartile of total score and 55.7% secured 2nd quartile of total score. Rest 7.6% of participant secured only 1st quartile of total score. Again, it affirms the need of training in Public Health specifically on NCD management for private medical practitioners (Table 5).

## Discussion

Many medical educators believe that continuous medical education (CME) is the traditional and gold standard approach to training public health professionals, so training like short course and certificate programs should be offered to meet exiting professional needs<sup>7</sup>. While reviewing the curriculum of College of General Practitioners of Bangladesh and Diploma in Family Medicine (FMD) under the University of Science and Technology Chittagong it has been found that in both documents' disease prevention and health promotion especially for non-communicable disease is not adequately addressed. It is required to assess whether private medical practitioners were exposed to the key contents in the areas for prevention of NCDs and whether they felt this exposure was adequate<sup>8,9</sup>.

The need of training for healthcare provider in evidence-based lifestyle interventions both at under-grad and postgraduate level and in-service is acknowledged by many countries including India<sup>10</sup>. Further, there is a considerable body of research that strongly supports the benefits of lifestyle change as a means of decreasing NCD risk. Even modest changes in behavior can substantially reduce morbidity and mortality<sup>11</sup>. Inadequate knowledge of the participants on NCD screening (3.8%), NCD epidemiology (8.9%) and NCD prevention (5.1%) that have observed from the present cross-sectional survey favor the training need on NCD prevention.

## Conclusion and Recommendation

Globally, urbanization has been occurring more rapidly in small-to-medium-sized cities in less-developed countries of Asia including Bangladesh, which has led to the increase in the burden of NCDs. It is, therefore, utmost important for training to have focused component of NCDs at postgraduate levels through continuing medical education and other training.

General medical practice often includes as a substantial component an understanding of community-based factors that shape health and the delivery of health services. In changing dynamicity of the burden of chronic diseases, private medical practitioners/ family physicians need to adapt and develop their workplaces to help put in place systems for preventing and detecting health conditions like hypertension and diabetes. They need to build specialized skills in detecting risk factors of chronic disease and surveillance on NCDs to intervene in time and adequate prevention program for NCDs. Existing institutions

that are providing post-grad training courses for Private Medical Practitioners like BAFM&R and BCGP may consider including topics like prevention and control of NCDs in their Post-grade Fellowship and FMD Diploma Course Curriculum considering the NCD burden in Bangladesh and thereby prepare need based medical practitioners.

### Limitations of the study

Due to constrain in resource and time the sample size of this cross-sectional survey was confined to 79 participants after cleaning data set. Findings of this study may not be generalized rather the whole picture shows the body of knowledge on NCD among the private medical practitioners. Thus, these findings also restrict for the external validity of the study.

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