

Title: Formative evaluation of a revised Master of Public Health curriculum

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What problem was addressed: Bangladesh is one of the most densely populated countries (1021 people per sq. Km.); one-fourth poor, half illiterate, and three-fourths living in rural areas. In recent years disease patterns have changed from acute infectious and deficiency diseases to chronic non-communicable diseases.¹ Frequent outbreaks have been reported, caused by new disease agents (e.g., Chikunguniya), new strains, or non-infectious agents (pesticide).

Although Bangladesh has had many achievements in public health, there are areas where competent public health professionals are needed to meet changing global and national demands. Surveys conducted in 2010 and 2011 revealed lack of competencies in Bangladeshi public health graduates; thus the 'Master of Public Health' curriculum was revised in 2012. The new program extends duration of education period from 12 to 18 months, organizes the content into modules, and adds an extended research period. We conducted a formative evaluation to identify remaining gaps in the curriculum and to develop recommendations for further alignment with national needs.

What was tried: We conducted formative evaluation in two steps using a mixed method approach: (1) needs assessment from perspectives of three different stakeholder groups; and (2) review of the MPH epidemiology curriculum. The study samples included 10 faculty members, first cohort of graduates (15) completing the new curriculum, and five heads of different epidemiological institutions. Data were collected through: curriculum document review; information from stakeholders obtained through focus group discussions and in-depth interviews, and literature review. We reviewed the literature and stakeholder needs assessment data with the curriculum objectives to identify areas of alignment and gaps. We also reviewed curriculum content to identify skills and competencies that graduates needed.

What lessons were learned: The formative assessment revealed that much of the revised curriculum was effective, e.g., graduates are competent in estimating disease burden including trend analysis, handling epidemiological data; planning and conducting epidemiological studies, etc. However, there were a few major gaps, including: graduates were neither sufficiently competent nor confident in setting up epidemiological surveillance systems and investigating outbreaks, using epidemiological data in policy and planning, assess risk, etc. Accordingly, these skills need to be strengthened to accommodate the changing disease patterns.

In-depth analysis of the curriculum revealed an overall learning goal to conceptualize the principles of epidemiology; we found, however, that while this aim covered all issues important in general, it had no specific learning objectives. Neither faculty nor students were aware of thematic or session objectives. This gap allowed faculty freedom in creating

objectives which they viewed as important, but also allowed omission of important components. The curriculum analysis also revealed that the epidemiological issues were mostly taught from a theory based approach. Thus the MPH graduates were not competent or confident to perform epidemiological activities in real life. This information is being used to develop a competency-based curriculum so that graduates can contribute in improving public health of Bangladesh.

ⁱ Karar ZA, Alam N, Streatfield PK (2009). Epidemiological transition in rural Bangladesh, 1986–2006', Global Health Action.