

## Good health at low cost: can Britain learn from Bangladesh's low-cost, low-tech solutions to the chronic disease crisis?

International breakfast seminar given by Dr Tracey Koehlmoos, 18 October 2011.

This is the latest in the series of International Breakfast Seminars held by C3 Collaborating for Health ([www.c3health.org](http://www.c3health.org)). Dr Tracey Koehlmoos is a health systems scientist with the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B).

Please note that the slides from this seminar are available on the C3 website.

### Introduction from Christine Hancock, Director, C3 Collaborating for Health

C3's director, Christine Hancock welcomed Dr Tracey Koehlmoos and the audience to the seminar at the House of St Barnabas, an historic building in Soho, London, which houses a charity supporting homeless people through employment and life-skills training.

### The health system in Bangladesh

Dr Koehlmoos provided a fascinating insight into the health system in Bangladesh, and the strides being taken to focus attention on the emerging challenge of chronic non-communicable disease (NCD). Underpinning her presentation was the question of what the United Kingdom can learn from Bangladesh's low-cost, low-tech solutions to the chronic disease crisis.

Tracey emphasised the importance of understanding the culture and context of different countries before offering advice or telling them what they should be doing to improve their situation. She provided an illuminating overview of the development of Bangladesh since the devastating War of Liberation in 1971. Life expectancy in 1971 was 40 years and is now 65.4 for men and 67.9 for women. The current population is in the region of 150–160 million, and the official outcome of the 2011 census is eagerly anticipated.

Comprised of over 300 scientists, the ICDDR,B is similar in remit to the Medical Research Council in the UK, or the Centers for Disease Control and Prevention in the United States. A large study exploring the development of the health system in Bangladesh included a literature review of health systems and other related factors such as education and the economy. Qualitative methods included 18 key informant interviews with key players, including historical leaders and those involved in the founding of the health system, and 20 focus-group discussions with local people (including family welfare assistants, traditional birth attendants and village doctors) – exploring what is important to them now in terms of health and what was important as they were growing up. These approaches were followed by thematic analysis and triangulation. It was an iterative revision process with a wide variety of stakeholders. The government of Bangladesh was very supportive of the work.

The outcomes of the work are documented in a book, *Good Health at Low Cost*, launched in October at the London School of Hygiene and Tropical Medicine, which is available at <http://ghlc.lshtm.ac.uk/>.



Director: Christine Hancock

First Floor, 28 Margaret Street, London W1W 8RZ, United Kingdom; Tel +44 (0) 20 7637 4330; Fax +44 (0) 20 7637 4336

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The key messages and issues include:

- at its founding in 1971, Bangladesh suffered food shortages, famine, natural disasters, poorest country on the planet;
- its commitment to health development in advance of economic development – atypical among developing countries – has created:
  - increase in life expectancy from 45 years in 1960 to 66 years in 2009;
  - decreasing child mortality (240 per 1000 to 45 per 1000);
  - no more seasonal famine – now the challenges are food security and affordability; and
  - excellent disaster preparedness.

## Three key factors in shaping and strengthening the health system

### Factor 1: Political commitment to health

There is a strong political commitment to health, health-related activity and innovation, which transcends party politics such that major reforms are upheld during government change resulting in ongoing development:

- on track to achieve MDG on child mortality;
- family planning – fertility has declined from 6.2 to 2.7 children per woman (no longer promoting permanent methods of family planning);
- response to Alma Ata;
- targeted expanded programme of immunisation;
- drug policy – including the development of indigenous pharmaceuticals – first country with essential drugs list;
- sector-wide approaches (there were previously 138 vertically funded programmes, creating big problems for government);
- integrated management of childhood illnesses (IMCI);
- health nutrition programmes; but
- challenges due to the fact that half the country is disappearing as a result of climate change

An example of government-supported innovation is the introduction to the use of oral rehydration solution (ORS) – health workers visited every single family in the country and trained at least one person, usually the mother, in the preparation and use of ORS for treatment of diarrhoea.

### Factor 2: Community health workers

Community health workers (CHWs) are the backbone of public and non-state sector – providing low-tech, low-cost interventions (see, for example, Simon Lewin's work). Being a community health worker was the first job available to women following the War of Liberation, in which many had taken an active role.

### Factor 3: Role of non-state sector

- 2,000 NGOs extend government capacity
- Pharmaceutical industry – government-supported development focused on the use of indigenous medicines and local production
- Informal providers – 400,000 have been partially trained. They are very receptive to training – and it is important for the government to show stewardship.

## NCDs in Bangladesh

A number of non-health factors have been transforming the country since Liberation:

- one language; one culture; one people;
- stable government;
- economic growth;
- empowerment of women – literacy 60% for men and women;
- microcredit; and
- external labour migration – 2,000 men provide remittances from work in the Middle East.

Greatest NCD risk factor: ageing (there will be a 10-fold increase in elderly population during this century)

- 26% of the population is over 60;
- NCDs are responsible for 54% of deaths.

While there have been big improvements in addressing maternal and child health and communicable disease, NCDs had not been on the radar until relatively recently, and there has been an apparent dramatic rise in deaths from NCDs over the past 20 years. However, this may be partly explained by a previous lack of accurate data rather than dramatically increasing incidence: 'We didn't even know enough to ask the right questions about causes of death.' Based on the assumption that women do not smoke, the urban health survey has not even asked women if they smoke: women do, however, chew tobacco and the overall rate of tobacco use is increasing. Cardiovascular events are now happening in younger age groups in Asia and there are similar levels of NCDs among the poorer levels in society as the richer. Also, women have more diabetes complications than men.

## What is known and where are the information gaps?

- The burden of disease data needs to be developed – there is a need for good population-based studies, and relevant research is under way
- Economic burden – to households and society
- Low-cost interventions that are proven to work

There is a lack of good-quality evidence about programme effectiveness despite the existence of some flagship institutions focusing on diabetes and cardiovascular disease. Broadening of scope and additional rigour and government engagement would help to generate data about what works and what needs to be done.

## Shared learning

- Growing evidence on the use of lay health workers, for example UnitedHealth diabetes model in the United States, in which those at risk or with pre-diabetes are offered a 12-week programme to help prevent the move towards diabetes.
- Bangladesh can learn from UK work with South Asians.

Much of the discussion also focused on shared learning (below).

## Discussion

In discussion about the use of lay workers to promote health, Rebecca Rosen, a GP, highlighted the fact that the UK uses lay workers but not systematically. An example was given of UK pharmacy workers now providing health advice and promotion of wellness. Tracey noted that there is increasing evidence of impact of lay workers and peer educators and talked about the challenge of encouraging professionals to relinquish control, and the importance of getting high-level champions among the professions and organisations, such as the BMA, to support the contribution of lay workers in, for example, supporting peer

groups working in prevention and management of diabetes. She also talked about the approach used in Bangladesh whereby physicians are briefed and oriented to particular projects but the lay workers are trained for implementation. The issue of incentives for lay workers was also discussed – currently, in Bangladesh, one of the most common incentives is the sale of antibiotics.

Robin Stott asked if lay workers were selected by their local communities but Tracey said no, the most important issue underpinning the success of a lay worker was their level of motivation to do the work.

Richard Smith asked a question about the position of international pharmaceutical companies and their place within the system. Tracey confirmed that there are about 200 pharmaceutical firms in Bangladesh and that all drugs provided by public sector/government are made there and not by the international companies. Counterfeiting can be a problem in more remote areas, but not significantly so.

A question was asked as to how the health system continued to develop in a coherent and consistent way regardless of the type of government in power, unlike the situation in the United Kingdom, where a new government almost inevitably results in a reorganisation of the NHS. Tracey suggested that sector-wide approaches, five-year plans and donor oversight help keep a consistent focus on health regardless of who is in power.

Dr Sumantra Ray (MRC Human Nutrition Research, Cambridge) asked about the use of social media and shared learning. Tracey referred to the widespread use of new communication technologies including Skype, which support regional partnerships and prevent reinvention of the wheel. In relation to social marketing, Tracey acknowledged that the biggest challenge was in moving from awareness to behaviour change.

Tracey suggested that there is still much to be done to test out what works best at different levels and to encourage some health workers and others to change their mindsets about NCDs and to start to assess and screen people. She noted, for example, that there were no smoking-cessation products available in the country until last year, and that donors are not focused yet on NCDs.