chronic disease news

VOLUME 2 ISSUE 1 MAY 2010

a newsletter of

Centre for Control of Chronic Diseases in Bangladesh

icddr,b KNOWLEDGE FOR GLOBAL LIFESAVING SOLUTIONS

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JOHNS HOPKINS BLOOMBERG SCHOOL of PUBLIC HEALTH

IDS Institute of Development Studies

Editorial

Dear Readers,

Welcome to the third issue of Chronic Disease News. Through this newsletter we share with you the latest activities of our research programme and insight into the current chronic disease situation in Bangladesh. I hope you enjoy the long awaited findings from our study on the risk factors and prevalence of different chronic diseases in rural and urban communities.

The last few months have seen a rapid increase in the level of activity for the Centre for Control of Chronic Diseases in Bangladesh (CCCDB). We have started our MPH Plus programme with our partners from BRAC University James P. Grant School of Public Health and the Institute of Development Studies. Six promising students have joined the chronic disease team based in Dhaka and are receiving course work and research training.

Our biggest event was the launch of the Centre of Excellence, CCCDB, on 26 April with the active participation of the Director General of the Directorate General of Health Services, Ministry of Health & Family Welfare, chronic disease experts and health professionals from the public, private and NGO sectors in Bangladesh. We were fortunate to also be joined for the event by senior leadership from the UnitedHealth Group and the National Heart, Lung and Blood Institute who spoke at the launch as well as visited with officials, health sector leaders and various field sites of ICDDR,B while in Bangladesh.

On the 6th of April we observed World Day for Physical Activity to promote regular physical activity as a prevention and control of chronic illnesses. This is a global movement and the CCCDB was proud to bring it to Bangladesh. You will find a detail on our activities in this issue.

In late March we co-hosted a two-day international childhood cancer forum, which was held in Dhaka to explore and set priorities for the unmet need in the country to combat childhood cancer. This workshop was jointly organized by British Columbia Cancer Agency, Canada, Bangladesh Medical Research Council, Dhaka, ICDDR,B, Centre for International Child Health, British Columbia Children Hospital, Canada, Teenage and Young Adult Cancer, University of Manchester, UK and EHIME University, Japan.

This issue of the newsletter will also highlight the activities of the CCCDB that are being funded by the UnitedHealth Group (UHG). UHG project will always have a special place within our collaboration as we first came together as partners around the issue of chronic disease in response to a call for proposals from the UnitedHealth Group in July 2007. It has been a long road with a steep learning curve since then and we look forward to the challenges ahead.

Please, enjoy this issue of the Chronic Disease News!

Alejandro Cravioto
Executive Director, ICDDR,B

Chronic disease prevalence and risk factor situation in ICDDR,B Health and Demographic Surveillance Sites

Chronic diseases, such as heart disease, stroke, cancer, chronic respiratory diseases and diabetes, are by far the leading causes of mortality in the world, representing 60 percent of all deaths. The World Health report says that this invisible epidemic is an under-appreciated cause of poverty and hinders the economic development of many countries. Contrary to common perception, 80 percent of chronic disease deaths occur in low and middle income countries.

According to WHO, Bangladesh has been experiencing an epidemiological transition from communicable diseases to non-communicable diseases. Tertiary level hospital data indicate that cardiovascular diseases have already appeared as one of the leading causes of mortality.

To identify the burden of risk

Table 1. Prevalence of Self Reported Diagnosed Chronic Conditions, 2009

Type of condition	Rural			Urban		
	Male	Female	Total	Male	Female	Total
	9,667	20,293	29,960	3,917	5,161	9,078
Hypertension	8.9	14.8	12.0	12.2	20.6	16.1
Diabetes	3.6	3.5	3.6	7.4	8.6	8.0
Abnormal blood lipids	0.2	0.3	0.3	4.9	5.0	5.0
Overweight	0.4	0.6	0.5	5.0	9.6	7.2
Bronchitis	1.0	0.5	0.7	1.8	1.1	1.5
Heart attack	0.6	0.3	0.5	1.4	1.2	1.3
Angina or coronary heart disease	5.2	5.9	5.5	4.3	8.0	6.1
Stroke	2.4	1.6	2.0	1.7	2.1	1.8
Asthma	3.9	3.8	3.9	5.0	5.0	5.0
Oral cancer	0.1	0.0	0.1	0.0	0.1	0.0
Lung cancer	0.0	0.1	0.0	0.0	0.1	0.0

factors, care seeking behavior and chronic illness, the Centre for Control of Chronic Diseases in Bangladesh (CCCDB) is working on establishing a baseline for new research on non-communicable chronic diseases. For this reason a risk factor and self-reported chronic disease prevalence survey was conducted in four Health and Demographic Surveillance Sites (HDSS) of ICDDR,B. The survey was conducted in three rural sites (Matlab, Abhoynagar and Mirsarai) and one urban site, Kamalapur located in Dhaka. Between March and December 2009, approximately 39,000 individuals, aged 25 years and above, were interviewed in these sites. The number of participants varied slightly between sites so that 6,373 individuals participated from Matlab, 11,593 from Abhoynagar and 11,994 from Mirsarai, and 9,078 people took part from the urban site Kamalapur.

In all three rural sites, information on behavioral risk factors and occurrence of a predefined set of 11 chronic conditions and related information was collected using a printed questionnaire, whereas in urban Kamalapur site information was collected using Personal Digital Assistant (PDA).

Among the population included in the survey 23% of rural and 32% of urban respondents reported at least one chronic condition. Hypertension was the most frequently reported chronic conditions with 12% of the respondents in the rural sites and 16% in the urban site reporting having been diagnosed with hypertension. Women reported higher rates compared to men. Table 1 provides an overview of the self-reported prevalence rates of the chronic conditions included in the research.

This study confirms that the general facts on chronic conditions; prevalence rates increase with age, women are at higher risk and chronic conditions are wealth related. In urban area while in the age group of 25-40 years 23.4% individuals reported of any chronic condition, in the age group of 60 years and above 51.3% reported of any chronic condition. In case of the rural areas 12.4% of the respondents from 25-40 years of age group reported for any chronic condition whereas in the age group of 60 years and above 40.8% reported this. Table 2 provides an overview of the prevalence of self reported any chronic condition by sex and age group with the indication that women are at higher risk in all age groups.

Indicating chronic conditions are wealth-related, the study shows that the poorest and poor are at lower risk than the less and least poor, and prevalence rates are higher in urban areas than in rural. In urban area 18.8% in the poorest quintile have any chronic condition compared to 46.5% in the least poor quintile and in rural area 16.2% in the poorest quintile reported of having any chronic condition compared to 31.6% in the least poor quintile. However, access to diagnostic care may decrease with income so more research is needed.

Since the chronic conditions were self reported and not diagnosed by an independent physician working for the research team, it was considered important to get a sense of the care seeking behavior of individuals with chronic conditions as well as the possible validity of the diagnosis,. Thus, we collected information as to which type of provider had initially given the diagnosis. A majority of the reported chronic conditions were diagnosed by a

Table 2. Prevalence of Self Reported Diagnosed Chronic Conditions by Sex and Age Group, 2009

Age Group	Rural			Urban		
	Male 9,667	Female 20,293	Total 29,960	Male 3,917	Female 5,161	Total 9,078
25-40	9.6	14.7	12.4	18.5	28.4	23.4
40-50	17.8	27.8	22.9	31.0	47.9	38.7
50-60	28.2	35.2	31.7	42.6	55.3	47.8
60+	42.5	39.2	40.8	45.4	60.7	51.3

physician, most frequently an MBBS doctor and less frequently a specialized doctor. In the rural surveillance sites almost 55% of the diagnoses were obtained from an MBBS doctor and 11% from a specialized doctor. In urban Kamalapur site this was substantially higher, i.e. almost 69% of the diagnoses were obtained from a MBBS doctor and over 25% from a specialized doctor. The rural-urban differences may be explained by differences in access to healthcare services, both in geographically (distance) as well as financially (affordability).

Affordability appears to play a significant role in choice of provider; the percentage of respondents with a chronic condition diagnosed by an MBBS doctor or specialized doctor (qualified healthcare provider) is substantially lower for respondents from the poorest household than those from the least poor households; in the rural sites 49% of the respondents for the poorest households had their chronic condition diagnosed by a qualified healthcare provider, compared to 78% of the respondents from the least poor households. At Kamalapur this rate was 62% for the poorest and 94% for the least poor.

If not a doctor, who made the diagnosis?

In general, there are differences in alternative healthcare providers diagnosing chronic conditions; in rural areas the large majority of those who did not or could not consult a doctor for their chronic condition, were diagnosed by an informal, unlicensed health service provider (known as Village Doctors). In the urban areas, the drug vendors played an important role.

Launching of the Centre for Control of Chronic Diseases in Bangladesh

Centre for Control of Chronic Diseases in Bangladesh

To combat with chronic diseases in Bangladesh ICDDR,B launched the Centre for Control of Chronic Diseases in Bangladesh (CCCDB) on 26 April 2010. CCCDB is a partnership between ICDDR,B, BRAC, Johns Hopkins Bloomberg School of Public Health and Institute of Development Studies and the programme secretariat is based at ICDDR,B in Dhaka.

Chronic diseases are the leading causes of death in Bangladesh with cardiovascular disease being the single greatest cause. Diabetes, stroke and cancer are major contributors too. Chronic disease affects men and women across all strata of Bangladeshi society including indigenous people. CCCDB is working in the context of this rising trend in Bangladesh, with funds from UnitedHealth Group and National Heart, Lung and Blood Institute (NHLBI).

The launching ceremony took place at Sasakawa auditorium. The Executive Director of ICDDR,B Professor Alejandro Cravioto inaugurated the session. Leading cardiologists, pulmonologists, oncologists, diabetologists, endocrinologists and other health professionals from national and international leading chronic disease specialty institutes were present at the ceremony in addition to the media. Director General of Directorate General of Health Services Professor Dr Shah Monir Hossain graced the occasion as chief guest while eminent cardiologist of Bangladesh National Professor Brig (Retd.) Dr Abdul Malik was the Guest of Honour. Other eminent speakers included the Executive Vice President of UnitedHealth Group Mr Simon Stevens; the Acting Director of NHLBI Dr Susan Shurin; and the Executive Director of UnitedHealth Group Global Chronic Disease Initiative Dr Richard SW Smith. The CCCDB Project Coordinator and Programme Head of Health and Family Planning Systems Dr Tracey Pérez Koehlmoos concluded the programme with an inspirational vote of thanks.

The speakers highlighted the current chronic illness situation with a global perspective as well as the devastating impact of these diseases in Bangladesh. They called for collaboration from the public, private and NGO sectors to come forward to address this issue.

UnitedHealth Group funded research in the CCCDB

The UnitedHealth Group, one of the world's largest health and wellbeing companies, started a Chronic Disease Initiative to create, fund, and partner with centres in low and middle income countries to counter the pandemic of chronic disease sweeping through those countries.

In July 2007, UnitedHealth Group created a call for Expressions of Interest which acted as a catalyst to bring together a large, multi-disciplinary group of researchers at ICDDR,B to discuss the need of expanding our research scope to include non-communicable diseases. Quickly we were able to identify strong partners in BRAC, the Johns Hopkins Bloomberg School of Public Health and the Institute of Development Studies to successfully introduce the Centre for Control of Chronic Diseases in Bangladesh (CCCDB) as a Centre of Excellence in the UnitedHealth Group Global Chronic Disease Initiative. Further, we developed an alliance with many of the well-established, leading non-communicable disease related specialty hospitals and foundations in Bangladesh.

Since that time, the UnitedHealth Group (UHG) has become a strong proponent of Bangladesh and of the CCCDB. The Executive Vice President of UHG Mr Simon Stevens visited Bangladesh to attend the launch of the CCCDB along with Dr Richard Smith, Executive Director of the UnitedHealth Group Global Chronic Disease Initiative. It was Dr Smith's third visit to Bangladesh. He immortalized his visit to Matlab in a blog for the British Medical Journal available on line at: http://blogs.bmj.com/bmj/2010/05/02/richard-smith-on-matlab-bangladesh/

The programme of work, designed and implemented under the auspices of the UnitedHealth Group, is diverse and includes research, training and knowledge translation. As a co-funder of the CCCDB along with the National Heart, Lung and Blood Institute under National Institutes of Health, UnitedHealth funding plays an important role in supporting the CCCDB secretariat and the four studies described in Chronic Disease News Issue 2 to include the purchase of equipment and support to our partners from the Institute of Development Studies. In our education programme, the UHG funds visiting professors and equipment like six new Dell computers for our interns completing the MPH Plus programme.

Initial work with UHG has focused on gaining a better understanding of the burden of disease and risk factors in Bangladesh as well as review of current methodologies and programmes in non-communicable disease control in low and middle-income countries. In Bangladesh little information is available that measures the non-communicable disease and its risk factors in the population and in the community. We recently completed a 39,000-person survey of risk factors, self-reported illness and health seeking behavior in three rural and one urban Health and Demographic Surveillance Sites. (Please read the results of this study in this issue, page 2-4)

Several important lessons have been learnt from this research. Particularly, we have learnt how to capture a large male sample in a system designed initially to primarily work with women.

Also we are completing a large scale methodology review that included a rigorous review of recent approaches to research on chronic illness. The review provides an overview of global issues particularly from low and middle income countries. Further, it looks at methods used for specific conditions including heart disease, tobacco related lung illnesses, chronic pulmonary obstructive disorder, and diabetes. HIV and TB were also included in order to look at diseases that are further along in terms of their methodological development, long term commitment and complexity of care in low income settings.

In the years ahead, with the support of the UnitedHealth Group we will complete the first salt intake assessment for Bangladesh and also conduct an Exploratory Study of Lifestyle Modification to Prevent Type-2 Diabetes among individuals with Impaired Glucose Tolerance (IGT). The UnitedHealth funds will partner with ICDDR,B's core funds for this pre-diabetes intervention study in which we will assess the feasibility and acceptability of lifestyle modification including smoking cessation in rural and urban settings. In addition to feasibility and acceptability of the intervention, the study will also explore barriers to interventions in the population with low body mass index (BMI) and marginal diet. A full-scale proposal of this pilot project is under consideration at the International Diabetes Federation (IDF/Bridges).

CCCDB observes World Day for Physical Activity

On 6 April 2010 the Centre for Control of Chronic Diseases in Bangladesh (CCCDB) in collaboration with the Staff Welfare Association of ICDDR,B observed the World Day for Physical Activity in line with the Agita Mundo Network.

Agita Mundo is a Brazil-based organization that encourages research, advocacy and community education for physical activity and health. Agita Mundo initiated the World Day for Physical Activity, a campaign for promoting physical activity that mobilized more than one million participants in more than 6,000 events around the world. The theme of this year's physical activity day was

Active Cities; Healthy Life!

Physical activity can prevent and control chronic health problems such as heart disease, high blood pressure, diabetes, osteoporosis, asthma, or obesity. Recent studies indicate that the prevalence of chronic diseases is increasing significantly in Bangladesh and not only within the urban population but also in rural and tribal population. Moderate physical activity for 30 minutes per day could provide health benefits and burn calories. No matter what activity (walking, climbing, swimming, cycling, dancing, playing etc.) is chosen, the 30 minutes of activity can be done all at once or divided into two or three parts during the day. Physical activity helps to lower blood glucose, blood pressure, bad cholesterol and raise good cholesterol, lower risk for heart disease and stroke, keep heart and bones strong, and provide many other benefits.

CCCDB designed posters, produced T-shirts and caps to observe the day. A colourful rally with featured participation of the ICDDR,B staff started from ICDDR,B premise in Mohakhali at 9am and wended through to the T&T play ground of Mohakhali before returning to ICDDR,B. The participants of the rally chanted slogans about doing exercise regularly for securing a healthy life. The programme continued till 11am and included a lively aerobics exercise session in which ICDDR,B staff participated. The session was followed by discussion and a question answer session on the benefits of aerobics and exercises. Acting Executive Director of ICDDR,B Dr M A Salam, Project Coordinator of CCCDB Dr Tracey Pérez Koehlmoos and President of Staff Welfare Association of ICDDR,B Ms Farzana Shahnaz Majid delivered motivational speeches during the event.

Plans for next year include scaling up the activities to include other Dhaka-based partner organizations.

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Design & Page layout: Syed Hasibul Hasan, Publications Unit, ICDDR,B
Printed by: Printlink Printers