

glimpse



WINTER 2012

Executive Director's Note



icddr,b Executive Director Dr. Alejandro Cravioto.

As icddr,b celebrated 50 years of service to Bangladesh and the world in 2010, we were already beginning to transform ourselves into a thriving institution ready for the next 50 years. Our Strategic Plan 2020 has us well on the way to meeting the challenges and opportunities that lie ahead and, already, our efforts are bearing fruit.

In November, the Board of Trustees congratulated us on the successful restructuring of four of our 10 new centres of operation and approved the establishment of the final six (page 5). Board members also acknowledged our hard work to raise icddr,b's international profile through humanitarian relief, high-level meetings and participation in the

2011 Clinton Global Initiative in New York (page 1).

These efforts have heightened awareness of icddr,b's contributions to public health and humanitarian services and have resulted in vital in-kind donations that allow us to continue our good work (page 1). The culmination of icddr,b's profile-raising efforts came the week of 13 November, when UN Secretary-General Ban Ki-moon visited the Dhaka Hospital and main campus (page 4).

He was impressed by both icddr,b's volume of research and by our ability to translate that research into global, low-cost solutions to serve people in need. Pledging his support, the Secretary-General noted, "I highly commend the noble work being done at icddr,b. The United Nations stands ready to work with you."

Other distinguished visitors to icddr,b's Matlab Hospital (page 2), Dhaka Hospital and various field sites also have pledged their support. And positive international media attention has bolstered our efforts.

In late July and early August, the award-winning Al Jazeera English documentary strand,

Witness, premiered an episode entitled *Dhaka's Cholera Wars*, which focused on icddr,b's efforts to combat cholera. In November, BBC World's global health series, *The Health Show*, highlighted icddr,b's work on maternal, child and newborn health in a six-part series (back page).

Whether fighting cholera in Somalia (page 1) or severe acute malnutrition (page 2), pneumonia and typhoid (page 3) in Bangladesh and beyond, icddr,b is an international leader in public health research, training and services.

In the last three months of 2011, our scientists and researchers published more than 200 articles in a variety of scientific journals and periodicals ranging from *BMJ*, *The Lancet Infectious Diseases* and *The American Journal of Tropical Medicine and Hygiene*.

During that time, icddr,b hospitals in Mohakhali, Mirpur and Matlab treated more than 45,000 patients, with the Dhaka and Matlab hospitals experiencing an unusual surge in October and November.

We thank you for your generous support as we continue to develop global lifesaving solutions. ■

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icddr,b 'Cholera Warriors' Assist in Somalia

In famine-stricken southern Somalia, almost five million people are at risk for cholera and acute watery diarrhoea due to malnutrition, lack of access to clean water, poor sanitation and hygiene, population movements and crowding in displaced sites. Years of civil war have torn apart Somalia's health infrastructure, leading to conditions in which the cholera bacteria can spread rapidly.

In September, icddr,b dispatched a multi-disciplinary team to help manage cholera outbreaks in the region. Dhaka Hospital's Dr. Azharul Islam Khan, Dr. P.K. Bardhan and Nursing Officer Ms. Momtaz Begum first travelled to Northern Kenya, where they reviewed existing control and prevention guidelines in the refugee camps along the Somali border. The team then conducted a 10-day training programme with the World

Health Organization and UNICEF in the beleaguered Somali capital of Mogadishu.

"We are proud to share our decades of research and practice in the management of cholera outbreaks. Our efforts were very well received by the local doctors

and patients," noted Dr. Bardhan.

"In fact, we have received several requests from UNICEF to return soon and continue with our medical treatment and training, since there is a serious shortage of skilled personnel in the region." ■



From left to right: Dr. P.K. Bardhan; Mr. Asib Nasim, UNICEF Somalia; Nursing Officer Ms. Momtaz Begum; and Dr. Azharul Islam Khan.

Partnering to Solve Global Health Problems

2011 marked the first year in which icddr,b was invited to participate in former U.S. President Bill Clinton's Clinton Global Initiative (CGI), which aims to forge solutions to the world's most pressing challenges. At CGI's September meeting in New York, icddr,b Executive Director Dr. Alejandro

Cravioto announced two important new initiatives—global cholera preparedness and health systems strengthening in Bangladesh.

For the first initiative, *Global Cholera Preparedness*, icddr,b partnered with the nonprofit humanitarian organisation AmeriCares to prepare for and respond to outbreaks of cholera and other causes of acute watery diarrhoea worldwide.

The initiative will secure necessary supplies, expertise and financial resources to ensure a timely global response. The US-based Hilton Foundation recently pledged US\$250,000 towards the initiative, supporting the cost of cholera kits, travel

and icddr,b staff. This generous grant will provide US\$90,000 in fund relief for icddr,b's clinical services.

For icddr,b's second commitment, *Health Systems Strengthening in Bangladesh*, it partnered with AmeriCares and MedShare, a nonprofit that recovers and redistributes surplus medical supplies and equipment. Over the next three years, AmeriCares and MedShare will provide US\$7.8 million worth of donated medicines, supplies and equipment to support a network of 12 hospitals in Bangladesh.

icddr,b will distribute the donated medical products, establish best practice guidelines for patient care and treatment and help medical directors train more than 7,600 health professionals, improving the quality of care for 5.4 million patients. ■



Nursing Education Consultant Ms. Lisa Chambers (left) and Clinical Governance & Systems Head Ms. Lutfe Ara (centre) oversee the arrival of humanitarian supplies from the United States.

Fighting Malnutrition at Home and Abroad

Approximately 500,000 children suffer from severe acute malnutrition (SAM) in Bangladesh. Yet resources and trained community physicians and public health personnel are few and far between. SAM is a life-threatening

condition caused by a protein, vitamin and mineral deficiency that leads to loss of body fat and muscle. Children suffering from SAM often die because health personnel unknowingly use practices that are suitable for well-

nourished children but are highly dangerous for children with SAM.

As part of public initiatives to boost support for malnourished children and their mothers, icddr,b's Centre for Nutrition & Food Security and its Dhaka Hospital have partnered with the Bangladesh Ministry of Health's Institute of Public Health Nutrition. In October, they organised two five-day train-the-trainer courses to teach participating paediatricians how to plan strategically using SAM management.

Nutrition & Food Security also is developing a ready-to-use-therapeutic food (necessary for the management of SAM) from locally available food ingredients—making it less expensive and more reflective of the local diet than the currently available formulation. ■



icddr,b works to make nutrition available and affordable.

Matlab Welcomes Distinguished Visitors

The Matlab Health Research Centre, roughly 50 kilometres to the southeast of Dhaka in the Chandpur district, is home to icddr,b's oldest and largest field site. Launched in the 1960s as a cholera research hospital on a small barge, Matlab has evolved into a full-fledged health research and training centre. It encompasses 142 villages, 41 community clinics, four sub-centre clinics and a hospital—all served by a dedicated, multi-disciplinary team of icddr,b researchers and clinicians.

The field site is world-renowned for its long list of research accomplishments, including Oral Rehydration Therapy, sari-filtered water for cholera reduction, zinc supplements to curb diarrhoeal incidence and tetanus toxoid to prevent neonatal deaths around the world.

With its free-of-charge health services, its focus on child and maternal health

and the oldest continually running longitudinal health and demographic surveillance site in the world, Matlab is an integral part of the icddr,b visitor experience. In recent months, Matlab has hosted a range of visitors interested in learning more about icddr,b's work there.

These include key members of the

icddr,b Core Donor's Group, which coordinates donor funding to icddr,b; board members of the Global Alliance for Vaccines and Immunisation (GAVI), including Her Royal Highness Princess Cristina of Spain; Swedish government delegates; the Brazilian Ambassador to Bangladesh and more. ■



Board members of the Global Alliance for Vaccines and Immunisation (GAVI), including Her Royal Highness Princess Cristina of Spain, visit Matlab.

Ground-breaking Pneumonia Study

Pneumonia, an acute respiratory infection of the lungs, is the leading cause of death in children worldwide. It accounts for more than 1.5 million child deaths annually—98 percent of which occur in developing countries—and it kills more children under age five than HIV, malaria and tuberculosis combined. Bangladesh has among the world's highest incidence rates and is one of the five countries that account for more than half the world's annual pneumonia cases.

In August 2011, icddr,b embarked on the groundbreaking, multi-country *Pneumonia Etiology Research for Child Health* (PERCH) study. Funded by a grant from the Bill & Melinda Gates Foundation and coordinated by the International Vaccine Access Center (IVAC) at Johns Hopkins Bloomberg School of Public Health, the study is expected to provide new data on

the causes of pneumonia, which will inform prevention and treatment methods.

With a plan to enrol more than 12,000 children in seven countries—Bangladesh, Thailand, Gambia, Zambia, Kenya, South Africa and Mali—PERCH will be the largest study of its kind in over two decades.

icddr,b has one of the higher number of target recruitments and will enrol 1,200 cases and 1,200 controls over the next two years. It was selected based on the strength of its proposal and its track record for pneumonia research, both in population-based surveillance and in interventions. ■



A new study on the causes of pneumonia will inform prevention and treatment methods.

Typhoid on the Rise

A lack of early diagnostic tools and the emergence of antibiotic-resistant typhoid strains have become major stumbling blocks in the fight against typhoid in Bangladesh. Experts in the field of typhoid research shared their findings and recommendations with each other at a November seminar organised by icddr,b and the Bangladesh Paediatric Association.

The World Health Organization estimates the number of typhoid patients at 21 million annually and the number of deaths at 600,000. "Dhaka Hospital surveillance from February 2008 to October 2011 shows 916 diagnosed typhoid cases—a significant increase from pre-2008 numbers," said icddr,b Medical Director Dr. Mark Pietroni. "Poor hygiene and lack of awareness of

the disease are part of the problem, along with improper use of antibiotic treatment that has caused resistant strains."

Safe and effective vaccines for adults and children exist, but not for infants. The high cost of the vaccines poses a major

Urban typhoid surveillance conducted at the Kamalapur field site in Dhaka shows that 51% of typhoid cases detected were resistant to three drugs (b-lactams, chloramphenicol and cotrimoxazole) and 49% to four drugs (b-lactams, chloramphenicol, cotrimoxazole and nalidixic acid).

barrier to their acceptance and use in Bangladesh. Given these roadblocks to prevention, early diagnosis and proper treatment of the disease are vital.

This is not always possible in rural

areas, though, where the quality of health services and awareness of typhoid are low. icddr,b Vaccine Sciences Director Dr. Firdausi Qadri, pointed to a new time- and cost-saving diagnostic technique, which may prevent the onset of typhoid in young adults and children. But such methods need more testing.

icddr,b's Communicable Diseases Assistant Scientist Dr. Doli Goswami says increased drug resistance makes treating typhoid with traditional antibiotics difficult. "Currently, we are doing more studies on exactly why

some strands are showing increased resistance to antibiotics, but I would say that indiscriminate use of antibiotics could explain the rise in typhoid cases," explained Dr. Goswami. ■

The UN Secretary-General Visits icddr,b

UN Secretary-General Ban Ki-moon and his wife, Madam Yoo Soon-taek, visited the Dhaka Hospital on 14 November as part of a three-day tour of Bangladesh. There, he met with key staff, talked to patients and gained a better understanding of icddr,b's low-cost, life-saving research and innovations.

- Medical Director Dr. Mark Pietroni demonstrated Oral Rehydration Therapy—the technique devised by icddr,b scientists for the treatment of diarrhoea and cholera that has saved millions of lives globally.
- Nutrition & Food Security Director Dr. Tahmeed Ahmed explained the treatment for severe acute malnutrition that affects an estimated 500,000 children in Bangladesh. He demonstrated how ready-to-use therapeutic foods being developed by icddr,b could save lives.
- Reproductive Health Director Dr. Laura Reichenbach explained how the modified “clean birth pack” can address post-partum haemorrhaging—the leading cause of maternal death in Bangladesh. The pack includes the drug misoprostol, an



From left to right: Nutrition & Food Security Director Dr. Tahmeed Ahmed, with Clinical Lead Dr. Md. Iqbal Hossain, explains severe acute malnutrition treatment to UN Secretary-General Ban Ki-moon on his tour with icddr,b Executive Director Dr. Alejandro Cravioto.

oxytocin alternative useful in resource-poor settings, and a biodegradable delivery mat developed by icddr,b. The mat, placed under a mother after home delivery, indicates whether she is haemorrhaging. A fully soaked mat alerts attendants if the mother should be referred to a hospital or health complex.

- Communicable Diseases Director Dr. Stephen P. Luby demonstrated the use of chlorine dispensers being installed by icddr,b free-of-charge in communities that lack access to clean water. Family members, with the turn

of a knob, can release a pre-measured dose of chlorine into their water supply to kill harmful bacteria. This two-year intervention project is part of the *Introduction of Cholera Vaccine to Bangladesh (ICVB)* study.

- Vaccine Sciences Director Dr. Firdausi Qadri spoke about the vaccine feasibility study being undertaken in Dhaka's cholera-prone Mirpur area. In conjunction with other programmes, it is looking to drastically reduce the number of cholera patients in the capital.

The Secretary-General was impressed both by the volume of research work and by icddr,b's commitment to translating its research into low-cost solutions to serve people in need in Bangladesh and throughout the world.

“I highly commend the noble work being done at icddr,b. Your humanitarian efforts to save human lives, particularly young children, are much appreciated. The United Nations stands ready to work with you,” he said.

icddr,b co-hosted a dinner with BRAC honouring the Secretary-General on 15 November. The dinner emphasised existing partnerships and innovative local solutions to address women's and children's health challenges in Bangladesh. ■



Ban Ki-moon watches a child taking rice saline with (left to right) Short Stay Unit Head Dr. Azaharul Islam Khan, icddr,b Medical Director Dr. Mark Pietroni and Dhaka Hospital Nursing Officer Ms. Cathrine Costa.

Board of Trustees Meets

The Board of Trustees (BoT) met in Dhaka on 26 and 27 November to review activities since June. Its members noted with approval that four of the 10 new centres—Vaccine Sciences, Nutrition & Food Security, Communicable Diseases and Chronic Diseases—are fully functioning. The BoT agreed to implementation of the remaining six centres.

Congratulating icddr,b's contribution to science and its humanitarian activities, which have raised its reputation globally, Chair of the Board Dr. Nicolaus Lorenz said, "The visit of the UN Secretary-General was not a coincidence. It happened because of the high-level connections that you have cultivated, which have increased icddr,b's image as a prestigious global organisation."

The BoT bade farewell to Dr. Mary Ann D. Lansang, Mr. Carel de Rooy and Dr. J.I. Santos, who have completed their tenure.

Members congratulated Mr. Musharraf Hossain Bhuiyan, former secretary of the Economic Relation Division (ERD), member of the board and chair of its Fund Development and Oversight Committee, on his appointment as Bangladesh cabinet secretary.

The board welcomed three new

trustees: ERD Secretary Mr. Iqbal Mahmood, who replaces Mr. Bhuiyan; Dr. Jeanette Vega, director of the Centre for Public Health Policy, Universidad del Desarrollo de Chile, Santiago; and Dr. Ann-Mari Svennerholm, University of Gothenburg.

The next BoT meeting will be held on 16-17 June 2012. ■



The icddr,b Board of Trustees.

Study Reveals Patterns of Violence against Women

An icddr,b study, released 20 December 2011, suggests that men with gender inequitable attitudes are significantly more likely to have perpetrated physical and sexual violence against female partners.

icddr,b carried out the qualitative study as part of the Change Project, coordinated by Partners for Prevention and funded by UNFPA Bangladesh. It was the first of its kind in the country and aimed to better understand, as the title suggests, *Men's Attitudes and Practices Regarding Gender and Violence against Women in Bangladesh*.

Data for the study were collected in 2011 and included 1,254 men in urban sites and 1,146 in rural sites in Bangladesh. Men surveyed almost universally supported at least one gender inequitable statement, and about 20-29 percent supported several gender

inequitable statements. The more negative the perception, the greater the likelihood of abuse. "These findings suggest that positively changing gender-related attitudes is a key factor in preventing violence against women," said principal investigator, icddr,b Scientist Dr. Ruchira Tabassum Naved.

Preliminary findings also revealed that men who were abused as children are two times more likely to be violent against women. "We need to break this cycle of violence," said Dr. Naved.

"We need to ensure that all our children have the chance to live in a peaceful home and grow into confident, happy, positive and peaceful adults with a very real opportunity to contribute to the social, economic and cultural fabric of their home and their country." ■



Caught on Film

Two major media outlets highlighted the work of icddr,b for an international audience towards the end of last year.

Dhaka's Cholera Wars, focussing on icddr,b's work to combat cholera, premiered in July on the award-winning Al Jazeera English documentary strand *Witness*. Filmed during several trips to Dhaka in 2010 and 2011, the show paints a broad picture of the city's troubled relationship with cholera.

Overcrowding, limited access to clean drinking water, poor sanitation, shortage of electricity for the city's water pumps and poor living conditions all contribute to roughly two cholera outbreaks each year—one before and one after the monsoon season.

The episode highlights how treatment of cholera cases at icddr,b's Dhaka Hospital results in a mortality rate of less than one percent. Medical Director Dr. Mark Pietroni said, during an on-camera interview, "If you arrive alive at our hospital, then you leave alive."

Dhaka's Cholera Wars also explored icddr,b's research efforts to fight the disease with continuous testing of water sources around the city, and the world's largest oral cholera vaccine study—the *Introduction of Cholera Vaccine in Bangladesh*. This five-year study involves 240,000 residents in Mirpur in the northwest of Dhaka. To watch the episode, log on to www.aljazeera.com/programmes/witness/2011/07/201171974227416827.html.



"If you arrive alive at our hospital, then you leave alive."—icddr,b Medical Director Mark Pietroni.

In early September, Rockhopper TV—a leading TV documentary team specialising in development, health and the environment—spent two weeks at icddr,b's Matlab Hospital to produce six short episodes for *The Health Show* on BBC World. These captured the different ways in which Matlab is making an impact on the lives of mothers and children in the area and are available for download at <http://www.rockhopper.tv/search-results/?WhiteLabelKeyword=&keywords=Matlab&x=14&y=2>.

The first of the six-part series focussed on what it is like to give birth in remote areas of Bangladesh, where expert medical help and proper technology are hard to find. Particularly heart warming were the stories of the community health workers and the new lives they have

brought into the world.

In subsequent episodes, *The Health Show* highlighted activities within the Matlab Hospital, including diarrhoeal disease research and care and maternal and child health services. A day-in-the-life feature gave viewers a look at the many challenges icddr,b doctors face and the immediate impact they have.

Other episodes focused on how technology is changing the lives of expectant mothers and how the Matlab Hospital's Kangaroo Mother Care Unit keeps premature babies warm through skin-to-skin contact with their mothers.

Television series like this, and *Dhaka's Cholera Wars*, allow icddr,b to show the world the excellent quality of care we provide and research we generate to improve public health outcomes for those most in need. ■



Canada



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