Use of mobile technology to ensure immunisation coverage in Bangladesh

30 July 2013, Dhaka – icddr,b (International Centre for Diarrhoeal Diseases Research, Bangladesh), Johns Hopkins Bloomberg School of Public Health (JHSPH) and the JHU Global mHealth Initiative, with Dhaka-based social enterprise, mPower-Health is excited to announce a new collaboration under which research will be undertaken to test a sustainable mechanism to support the Bangladesh Expanded Program on Immunization (EPI) through mobile technologies. Dr. Md. Jasim Uddin, scientist with icddr,b’s Centre for Equity Health Systems received a Grand Challenges Canada (GCC) award in November 2012 to undertake the study titled “Use of Mobile Phone for Improving Low Immunization Coverage among Children Living in Rural Hard-to-reach Areas and Urban Streets of Bangladesh”.

Launched in March 2013, the study is a collaborative effort among icddr,b, EPI Programme of the Ministry of Health and Family Welfare (MOHFW), Dhaka City Corporation, Non-government organisations (NGOs), JHPSH, University of British Columbia and mPower. The researchers are excited about the new collaboration, saying, “Johns Hopkins, icddr,b, and MoHFW of Bangladesh have been long-standing partners in the journey to improving health for women and children in Bangladesh. Working together with new partners like mPower-Health in collaborations like this one allows us to find new answers to old problems, harnessing our many years of experience to truly make a difference for those who need it the most,” said Dr. Alain Labrique, Director, Johns Hopkins University Global mHealth Initiative.

The main reasons for low immunisation coverage in hard-to-reach areas and among street children are the absence of effective systems to track newborn children and remind parents about immunisation sessions. “Our study will assess the feasibility and effectiveness of above stated auto birth registration and patient reminder systems through use of mobile phones to improve child immunisation coverage among hard-to-reach children. Successful implementation of the system will ensure equity in vaccination of Bangladeshi children, reduce vaccine preventable infectious diseases and reduce child mortality,” said Dr. Md. Jasim Uddin.

In 2012, a team led by Dr. Alain Labrique (JHSPH) and Mr. Mridul Chowdhury (mPOWER) was awarded a Grand Challenges Exploration Grant from the Bill and Melinda Gates Foundation to build a mobile-phone based system called mTikka for grassroots EPI workers to register newborns, schedule vaccinations, and promote timely immunization. JHSPH and mPower-Health, in partnership with the Ministry of Health and Family Welfare, developed mTikka as an innovative solution to address the gaps in EPI coverage due to which vulnerable infants remain unvaccinated past their
vaccine due date. The mTikka system centers around a “cloud” based national database holding vaccination records, allowing families, doctors and health supervisors to view and update every registered child’s record. This ‘virtual vaccine record’ has the potential to be a major breakthrough in the challenge to vaccinate every child appropriately and on time. The mTikka project uses common Android phone technology for the EPI workers, and allows any other user to use SMS to download an infant’s ‘virtual mTikka card’.

Every year 1.5 million children around the world die from vaccine preventable diseases. Globally, the Bangladesh Expanded Program on Immunization (EPI) is recognised for its excellence in coverage and reach. However, in Bangladesh, immunisation coverage among children living in rural hard-to-reach districts and urban streets remains low (42%-60%). While the JHSPH team is testing the mTikka in rural northwestern Bangladesh, the icddr,b team is also testing a version of the system in one rural hard-to-reach sub-district (Jamalgonj) and one urban zone (zone 5) of Dhaka City. In all study areas, mTikka is being used with the existing health systems of Bangladesh. Use of the mTikka technology will augment the traditional service delivery system of EPI in Bangladesh.

### Note to the Editor

About icddr,b

icddr,b is an international public health research institution based in Bangladesh. For more than fifty years, the institution has provided practical, low-cost solutions to health problems that affect billions of people living in poverty in South Asia and across the globe. icddr,b’s unique proximity to the health challenges of the developing world, both urban and rural, allows for cutting-edge research that is relevant, rigorously tested, scalable in resource-poor settings, and, most importantly, improves health outcomes and well-being of individuals in low-income countries around the world. icddr,b’s hospital treats over 160,000 diarrheal patients annually and has a zero percent case fatality rate. It is regularly called upon by the World Health Organization and local Ministries of Health to share their expertise worldwide.

http://www.icddrb.org/

About Johns Hopkins Bloomberg School of Public Health (JHSPH)

The Johns Hopkins Bloomberg School of Public Health has a big mission: Protecting Health, Saving Lives – Millions at a Time. Since it’s founding in 1916, the Bloomberg School has advanced research, education and practice to create solutions to public
health problems around the world. Faculty, staff and students have helped eradicate smallpox, made water safe to drink, improved child survival, reduced the spread of HIV and uncovered the dangers of tobacco smoke. Researchers and scientists are now discovering ways to eliminate malaria, increase healthy behavior, reduce the toll of chronic disease, improve the health of mothers and infants, and change the biology of aging. Every day, the Bloomberg School works to keep millions around the world safe from illness and injury by pioneering new research, deploying knowledge in the field and educating tomorrow’s public health leaders.

http://www.jhsph.edu/

About mPower

mPower Social Enterprises was born out of ClickDiagnostics Inc., which was founded by graduate students of Harvard University and MIT in 2008. mPower started its journey in Egypt in partnership with their Ministry of Health and Ministry of Communications and Information Technology. In early 2010, the center of gravity of mPower’s work shifted to Bangladesh with a partnership with the world’s largest NGO, BRAC. Subsequently, several other initiatives were undertaken with more major NGOs in Bangladesh covering many corners of the country. mPower is at the forefront of helping development agencies use information intelligently for better decision-making, managing and monitoring. We are a pioneer in the field of ‘development intelligence’, an area that is surprisingly much less developed than ‘business intelligence’. One core aim of our effort is to make ‘development intelligence’ an intricate part of the DNA of development agencies in the next 5-10 years.

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