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International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b)

icddr,b is a public health research organisation uniquely informed by its disease surveillance and humanitarian response activities, and the clinical services it provides through its hospitals and treatment centres. It uses local insights to find practical and low-cost solutions capable of addressing some of the most critical health concerns facing the world today.

Achievements Since 1978, when icddr,b was created in its current form, the focus of its activities has been the development of evidence-based solutions that deliver significant public health impact; the ultimate impact being saving the lives of those in greatest need.

icddr,b strives to develop solutions that can be embedded into public health systems with minimal investment of resources. It finds solutions that are both low in cost and simple to use so a mother in the urban slums of Dhaka – and her equivalents worldwide – can adopt them.

In the early 1970s, icddr,b researchers made a discovery that still stands among the most important medical innovations in the 20th century – Oral Rehydration Solution

(ORS). The development and application of ORS has decreased the death rates from diarrhoeal diseases by more than half in the last 30 years, saving more than 50 million lives worldwide, mostly children's.

A worldwide campaign launched in 1978 by WHO to reduce diarrhoea-related deaths featured ORS as a central strategy and led to a 60% decrease in under-five deaths from diarrhoea between 1980-2000. UNICEF now distributes approximately 500 million ORS sachets each year to over 60 countries.

Continually seeking simple and practical innovations, icddr,b scientists discovered that when taken with ORS, zinc reduces fatality rates through diarrhoea (still the second leading cause of childhood deaths), even more

dramatically. It also reduces the duration, severity and likelihood of hospitalisation.

Consequently, ORS-zinc combination therapy was up-scaled in Bangladesh through a nationwide programme – Scaling Up Zinc for Young (SUZY) children with diarrhoea. In 2004, WHO and UNICEF recommended the two-pronged, ORS-zinc approach for treating children with acute diarrhoea all over the world.

ORS is just one of the extraordinary solutions icddr,b has created that has been widely adopted. Another is the two doses of tetanus toxoid vaccine. icddr,b discovered that mothers given the vaccine before or during pregnancy can protect their newborns from tetanus, a leading cause of infant death throughout the world. This discovery ultimately led to global adoption of the vaccine for women of childbearing age. More than 31 million doses have been delivered through a major corporate responsibility initiative.

In its hospitals and research centres in Dhaka, Mirpur and Matlab, icddr,b operates a multidisciplinary approach to research where clinicians, demographers, social scientists and virologists work together, each bringing a different perspective and set of experiences to tackle pressing health issues. Consistent with icddr,b's philosophy of providing health solutions for the most vulnerable populations, medical care is offered free to those in need.

Training is also an important part of icddr,b's activities. It has trained more than 27,000 health professionals from over 78 countries. The courses provided include practical training in topics such as hospital management of diarrhoeal diseases, epidemiology, biostatistics, family planning, demographic surveillance and child survival strategies.

Success factors icddr,b's activities are supported by about 55 donor countries and organisations, including the Government of Bangladesh, UN specialised agencies, foundations, universities, research institutes and private sector organisations, as well as companies that share the centre's concern for the health problems of developing countries and who value its proven experience in helping

solve those problems. Support is provided in terms of financial investment but also through the facilitation and promotion of programmes.

icddr,b has always willingly shared its knowledge, collaborating with dozens of international academic, research, private sector and development partners to develop and share innovative global health solutions.

Future plans icddr,b will continue to develop and test interventions that improve health outcomes for people living in poverty. Its central objective remains to speed up application of research findings, from discovery to roll-out and implementation. This is essential to make significant strides in addressing both persistent and emerging public health issues. This will involve more scientists engaging with national, regional and global policy-makers, donors, and other key global health stakeholders.

In addition to tackling these strategic goals, icddr,b also plans to continue upgrading its laboratory and clinical facilities, to ensure its research excellence is matched by state-of-the-art facilities and its global competitiveness is maintained.

The IDB Prize icddr,b used the publicity and money generated by the IDB Prize to strengthen its mentoring programme and help four promising young scientists undertake research initiatives. Areas of investigation by the young scientists were enteric diseases, the diagnosis and treatment of pulmonary tuberculosis, and microbiological and molecular studies of antimicrobial potentials of medicinal plants, spices and herbs in Bangladesh. The mentoring programme provides opportunities for post-doctoral graduates who have completed their degrees or post-doctoral fellowships to become the next generation of scientists – both for icddr,b and for the country. Close mentoring by senior staff is provided to facilitate accelerated growth and to develop leadership skills at all levels across the organisation.



Established 1978
 Location Dhaka, Bangladesh
 Population 4,528 researchers and support staff. 113 scientists holding PhDs.
 Website www.icddr.org

Areas of expertise Addressing a broad range of public health challenges of people living in poverty in Bangladesh, and in low-income countries around the world.

150,000 icddr,b clinical services treat an annual average of 150,000 people with enteric diseases free of charge, almost one third of whom would die without intervention.

75% icddr,b developed an innovative method for treating Severe Acute Malnutrition in children, lowering the fatality rate of this life-threatening condition by 75% at its Dhaka Hospital.

50 million The development of Oral Rehydration Solution (ORS) has saved more than 50 million lives worldwide, mostly children's, in the last three decades.

