ROTAVIRUS INTRODUCTION AS AN OPPORTUNITY FOR STRENGTHENING BANGLADESH'S ROUTINE IMMUNIZATION SYSTEM

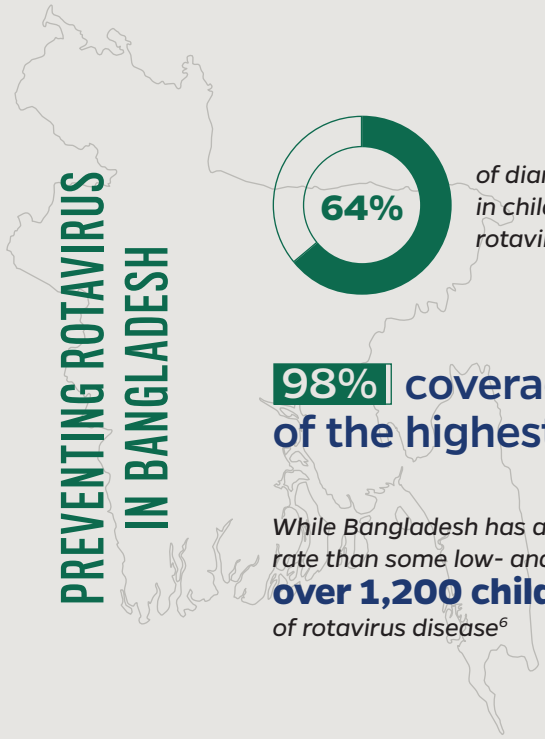
The Rotavirus Accelerated Vaccine Introduction Network (RAVIN) project supported Bangladesh in preparing for the introduction of rotavirus vaccine (RVV), which is currently slated for early 2020. This planning process helped to strengthen capacity within the country's immunization program.

The presence of an in-country technical advisor ensured that—despite infrastructure limitations, shifting political and health priorities, and frequent turnover among Expanded Programme on Immunization (EPI) leadership—RVV introduction remained a leading priority, with RAVIN providing independent technical advice and supporting institutional memory.

Infrastructure delays: Cold chain expansion

Bangladesh received Gavi Health Systems Strengthening funds in 2016—two years after an Effective Vaccine Management (EVM) assessment identified this as a priority—to expand and upgrade its cold chain to support EPI expansion.[1] Upgrades were required due to the planned introduction of rotavirus and HPV vaccines, coupled with an increase in the target population for all vaccines from 3.25 million to 3.76 million. While the peripheral cold storage expansion was largely complete, central storage facility timelines lagged significantly. Central-level upgrades were further complicated by the need to demolish a building and construct a new one to house the upgraded, expanded central cold store, a process that included a host of new stakeholders within the Ministry of Housing and Public Works and resulted in further delays.

To respond, RAVIN's technical advisors leveraged strong partnerships within the Ministry of Health and Family Welfare to support efforts to expedite cold chain expansion. They bridged communication gaps and



PREVENTING ROTAVIRUS IN BANGLADESH

of diarrheal hospitalizations in children <5 were due to rotavirus (2016)[2]

There are **3 million children** *without access to rotavirus vaccines in Bangladesh (4% of all children without access to the vaccine in the world)*[3]

98% coverage of DTP3, one of the highest in the region[4]

While Bangladesh has a lower rotavirus mortality rate than some low- and middle-income countries, **over 1,200 children die annually** *of rotavirus disease*[6]

In Bangladesh, one diarrheal disease hospitalization **can cost poor families more than 1/5 of their monthly income**[5]

developed relationships outside of the usual structures to smooth out bureaucratic challenges. After participating in international cold chain management training, they facilitated cold chain training at the sub-national level.

Competing priorities: Measles-rubella vaccination campaign

Around the time Gavi approved Bangladesh's application for RVV, the burden of measles in the country began to tick up. In consultation with WHO and UNICEF, Bangladesh scheduled a nationwide measles-rubella (MR) vaccination campaign for late 2019. It would target 34 million children between 9 months and 10 years of age.[7] Recognizing limited time, resources, and funding, RVV introduction has been delayed until after the MR campaign finishes. As such, ensuring that the MR campaign is implemented as planned and completed on schedule is crucial to avoid cascading impacts on RVV introduction and other planned EPI activities.

To ensure this goal can be met, RAVIN's technical advisor has supplemented and strengthened the capacity of the EPI team by supporting a range of EPI activities from an EVM assessment in Dhaka and Chittagong to a new vaccine application for HPV vaccine.

Changing leadership: Coordination with Ministry of Health and Family Welfare

As with many government civil service posts, high turnover exists at the leadership level, which can delay or even derail momentum within programs. For example, Bangladesh's EPI program manager changed four times within the three years of RAVIN's engagement in Bangladesh, which influenced timely coordination with the MoHFW and placed prioritization of the RVV rollout at risk. Some EPI program managers left the position after just six months.

To decrease the challenges of re-orientation and ensure that appropriate attention and energy could be focused on implementing the country's RVV plans, RAVIN's technical advisor met with each program manager immediately after they assumed the role, briefed them on RVV status in Bangladesh, and scheduled regular follow-up meetings.

ABOUT RAVIN

RAVIN is a partnership between the Johns Hopkins Bloomberg School of Public Health International Vaccine Access Center (IVAC), John Snow International Research & Training Institute (JSI), and the U.S. CDC providing strategic technical assistance in Afghanistan, Bangladesh, Cambodia, the Democratic Republic of the Congo, Lao PDR, Myanmar, and Nepal. Its support, which complements services and leadership provided by WHO, UNICEF, and Expanded Program on Immunization (EPI) teams, encompasses rotavirus vaccine introduction decision-making, Gavi applications, introduction preparation, implementation, and impact assessments. For more information, visit ivac.jhu.edu.

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