

# Hygiene Promotion through Routine Immunization



*FCHV conducting hygiene session*

Despite rapid progress over the past decade, diarrhoeal diseases and childhood undernutrition remain to be persistent challenges for Nepal's development and growth. Diarrhoeal diseases is still the leading cause of child mortality. Lack of access to safe drinking water, improved sanitation, and good hygiene practices, contribute significantly to this problem. Tackling diarrhoeal diseases requires a comprehensive package of protective, preventive and curative interventions. Vaccination against rotavirus, the cause of a large proportion of severe gastroenteritis in

young children, is a relatively new addition to this package, and is recommended by the World Health Organization (WHO) for global routine immunisation since 2009. The strength of the Nepal Expanded Programme on Immunization (EPI), and the potential introduction of a rotavirus vaccine in 2018/2019, offer opportunities for a comprehensive approach to reducing diarrhoeal diseases in the country in which preventive interventions such as hygiene and sanitation promotion are implemented alongside, and not separate to, protective interventions such as vaccines. Such an approach has not been



practiced in low-income countries that have introduced the rotavirus vaccine so far. The introduction of the rotavirus vaccine on its own is problematic; crucially, vaccines such as the rotavirus vaccines that are delivered orally as drops, have been shown to have lower immune response in trials in low-income countries than in middle/high income countries. The published vaccine efficacy trials found that rotavirus vaccines prevented 42.7% of severe rotavirus episodes in high-mortality Asia, and 50% in sub-Saharan Africa, compared with 91% of episodes in developed countries. It has been suggested that oral vaccine response can be weakened if the vaccinated person is experiencing WASH-related enteric infections, including diarrhoea and environmental enteropathy.

The Nepal National Committee on Immunisation Practices (NCIP) in March 2012 concluded that “vaccine introduction for enteric vaccines (rotavirus, typhoid, cholera) should be one component of an integral child health programme to decrease morbidity and mortality from diarrhoeal diseases, including safe water, hygiene, sanitation, nutrition and IMNCI”. Consequently,



in-line with the NCIP recommendation, WaterAid formed a partnership with the Nepal Ministry of Health and Population- Child Health Division (MoHP-CHD), to respond to the need for hygiene and immunisation integration. As a first step, a one-year pilot project was established, in which hygiene promotion activities were delivered in all routine immunisation clinics of four districts (Jajarkot, Bardiya, Nawalparasi and Myagdi).

### Pilot project initiatives

In April 2012, a scoping study was undertaken in Nepal to explore the feasibility and acceptability of incorporating hygiene promotion into immunisation programmes and the study concluded that integrating hygiene promotion interventions into immunisation programmes is acceptable to stakeholders and the challenge was how to proceed, rather than whether, to proceed. As a result, a pilot project was initiated in 2014 by the Nepal Ministry of Health and Population, Child Health Division with the technical support from WaterAid within the Expanded Programme on Immunisation in four districts (Jajarkot, Bardiya, Nawalparasi and Myagdi).

We have used WaterAid's hygiene behaviour change approach i.e. Behaviour Centred Design – BCD (ABCDE steps) to scientifically design, implement and evaluate the project. After scoping study, we have conducted formative research to understand the behavioural determinants, motives, barriers and socio-cultural variability among target population. Formative research also helped prioritizing five key behaviours. The hygiene promotion intervention package was developed through a creative process based on formative research in 2015. The package was pre-tested, finalized and endorsed by the Department of Health Services to execute through the routine immunization programme. The package tools include a mix of innovative, creative, simple-to-use promotion and demonstration aids, games, story-telling, handwashing rituals, competitions, commitment-making and certification for mothers/guardians who have completed the programme.

After building the capacity of the national, regional, districts and local level staffs including female community health volunteers in four districts. The project was launched formally in Nov 2015.

The actual one-year implementation of the pilot project happened during Feb 2016 – March 2017.



The sessions were conducted at the start of each immunisation session targeting 35,000 mothers/caregivers with children of 0-12 months, mobilizing 2,200 trained FCHVs across four districts. Rather than focusing on increasing knowledge of hygiene, the intervention focuses on changing behaviours and its associated social norms, encouraging positive hygiene behaviours, building on emotional behavioural drivers such as nurture, affiliation, disgust and social status/respect, and changing the behavioural setting by introducing nudges to reinforce behaviours. The intervention targeted multiple hygiene behaviours including exclusive breastfeeding, handwashing with soap, food hygiene, faeces management and water/milk treatment. This is done under a branded campaign titled “Clean Family, Happy Family”, and the main foundation of the campaign is to attend all five immunization sessions to immunize their children and practice all five key hygiene behaviours to make an “Ideal family”, an inspirational desire to attain.

### Pilot project outcomes

The third Party evaluation shows that the hygiene promotion intervention was effective in improving all key hygiene behaviours (from 2% during baseline to 53% after one-year of implementation) as the primary outcomes of interest, as well as increasing immunisation



coverage, reducing drop-out and vaccine wastage rate. It was helped to reach the un-reached population as secondary outcomes. In addition, information on diarrhoea prevalence in the intervention group was also captured as secondary outcomes. Although this was not measured in a controlled trial, it was however observed that the period prevalence of diarrhoea was 5% during the follow up survey among the intervention group, compared to 15% during baseline. The capacity of the health workers and FCHVs to run innovative hygiene promotion was increased. The results from the pilot initiative demonstrated that it is a feasible, viable and it is an effective approach to integrate hygiene promotion into routine immunization.

### Decisions from the pilot project review and final dissemination workshops

The Ministry of Health and Population, Child Health Division, and WaterAid jointly conducted a review meeting of the pilot project in February 2017, and a final dissemination workshop on 18 December 2017 after the final evaluation. After hearing the final outcomes of the pilot project, details from the districts, first hand experiences from the female community health volunteers and discussions among the stakeholders. Representatives from the Ministry of Health and Population, Child Health Division, and the other stakeholders including WaterAid agreed that nationwide scale-up should go ahead.

### Decision for nationwide scale-up (hygiene integration) alongside the Rotavirus introduction and ownership by Government

Based on the EPI multi-year plan and the outcome of sentinel surveillance of rotavirus strains, the Ministry of Health and Population, Child Health Division has decided to introduce the nationwide rotavirus vaccine in December 2019. The plan is to integrate rotavirus into the existing EPI programme. The hygiene integration pilot project translated the NCIP 2012 and global decisions into practice, and demonstrated effectiveness and feasibility for scale-up. The hygiene promotion package has been tested together with routine immunization and proven to be effective. The Ministry of Health and Population, Department of Health Services, Child Health Division have decided to integrate hygiene promotion (key behaviours) with routine immunization and also introduce the

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rotavirus vaccine with few modifications in the existing hygiene promotion package to make it more cost effective and sustainable. This step has been taken to maximize the benefits of rotavirus vaccine considering its vaccine efficacy in low-income settings like Nepal, to build the trust among people towards vaccine effectiveness, to change the behaviour of mothers / guardians as primary focus as well as to address the overall prevalence of diarrhoea (not only rotavirus) through the introduction of hygiene while introducing the rotavirus vaccine, and to support the maximum possible health impact for the children / people of Nepal. The scale-up decision was officially endorsed during the Scale up meeting organised by CHD on February 22, 2018. This decision shows the commitment and ownership of Nepal Government towards this programme.

The decision was also made to slim the hygiene behaviour change promotional package for nationwide scale-up based on the learnings from the pilot and without compromising the quality of the intervention. WaterAid and Child Health Division had organized the workshop to decide on the slim package and the package is now finalised. To operationalise the nationwide scale-up initiative, the other preparatory activities are currently ongoing.

After completion of one-year pilot project, Government has decided to continue retaining the programme in four districts before its full scale-up targeting to new cohort mothers / guardians with young children within those districts. Government of Nepal has been

contributing towards the continuity of this program in the pilot districts by allocating the budget for FCHVs incentive in the Red Book since FY 2016/17, FY 2017/18 and FY 2018/19. This certainly demonstrate the commitments from the Government to retain this novel programme.

## Coordination with EPI and WASH partners

Family Welfare Division and WaterAid has been working very closely with other EPI and WASH partners such as WHO, UNICEF, USAID and RAVIN and globally to share learnings as well for effective coordination for scale-up. FWD and WaterAid are in continuous dialogue with USAID for their financial support mainly for production of hygiene promotion materials for the nation wide scale-up and WA is also exploring funding for supporting the training and its operations. This initiative and evidence and lesson from it would help guide how hygiene intervention can be implemented at scale together with vaccine programme nationally.

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## ENDNOTES

- <sup>i</sup> Countdown 2015 – Nepal Health Data 2015 profile <http://www.countdown2015mnch.org/country-profiles/nepal>
- <sup>ii</sup> Preventive measures: vaccinating against rotavirus, cholera, typhoid, and measles; safe water, improved sanitation and handwashing with soap (WASH); adequate nutrition for mothers and children, such as breastfeeding and micronutrient supplementation (vitamin A and zinc). Curative measures: preventing and treating co-morbidities; oral rehydration; zinc supplementation; continued feeding; antibiotics for dysentery; and improved care seeking and case management. Source: United Nations Children's Fund (UNICEF), 2012. Pneumonia and diarrhoea: tackling the deadliest diseases for the world's poorest children. [http://www.unicef.org.uk/Documents/Publications/UNICEF\\_pneumonia\\_diarrhoea\\_report.pdf?epslanguage=en](http://www.unicef.org.uk/Documents/Publications/UNICEF_pneumonia_diarrhoea_report.pdf?epslanguage=en)
- <sup>iii</sup> World Health Organisation (WHO), 2009: Rotavirus vaccine position paper, in Weekly Epidemiological Record 18 December 2009. [http://www.who.int/wer/2009/wer8451\\_52.pdf](http://www.who.int/wer/2009/wer8451_52.pdf)
- <sup>iv</sup> Levine, M., 2010. Immunogenicity and efficacy of oral vaccines in developing countries: lessons from a live cholera vaccine. *BMC Biology*, 8:129.
- <sup>v</sup> Fischer Walker, CL and Black, RE. 2011. Rotavirus vaccine and diarrhoea mortality: quantifying regional variation in effect size. *BMC Public Health* 2011, 11(Suppl 3):S16
- <sup>vi</sup> Levine, M., 2010. Immunogenicity and efficacy of oral vaccines in developing countries: lessons from a live cholera vaccine. *BMC Biology*, 8:129.
- <sup>vii</sup> Velleman, Y., Greenland, K., Gautam, O., 2013. An opportunity not to be missed – Immunisation as an entry point for hygiene promotion and diarrhoeal disease reduction in Nepal. <https://www.researchgate.net/publication/259583774>