

# National Newborn Health Program Newsletter

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## Editorial Note



We are very pleased to present the 12 issue of National Newborn Health Program (NNHP) newsletter. You all know that the whole world is passing through a difficult situation. I would like to express my sincere gratitude to all the health workers of our health department who are working tirelessly.

This issue highlighted program performance review at the regional level, overview of different social medias and kangaroo mother care health care at various hospitals across the country.

We are grateful to all the governmental and non-governmental organizations that have been assisting us in implementing our program. Finally, I wish everyone a healthy and beautiful life.

**Dr. Muhammad Shariful Islam**

Assistant Director & Program Manager, NNHP & IMCI  
Directorate General of Health Services (DGHS)

## Speaker's Corner



We need to maintain the normal pace of service utilization for achieving the SGD targets in health sector. Our health workers are working hard to manage the current situation. We have taken different initiatives to ensure the essential services of mother and newborn. The current status of service utilization

tell us that we are returning on the normal track.

I would request all government and non-government agencies to support each other to do better amid COVID-19 situation.

**Prof. Dr. Abul Bashar Mohammad Khurshid Alam**

Director General  
Directorate General of Health Services (DGHS)  
Ministry of Health and Family Welfare

## Maternal and Child Health Division (MCHD) of icddr,b shares findings from the implementation of Pulse Oximetry at IMCI corners in Kushtia



Photo Credit: Save the Children

The study **“Assessing the feasibility and effectiveness of introducing pulse oximetry in IMCI services to manage acute respiratory infections at first-level health facilities of Bangladesh (IMCI-PO)”** conducted by icddr,b in Kushtia with the financial assistance of NIHR Global Health Research Unit on Respiratory Health (RESPIRE) of The University of Edinburgh. NNHP & IMCI program of Directorate General of Health Services (DGHS) and Kushtia health authority provided necessary administrative support for successful completion of the study. Maternal and Child Health Division of icddr,b organized a dissemination meeting on 18 August 2021 at icddr,b, Mohakhali campus and shared the findings of the project.

Dr. Muhammad Shariful Islam, Assistant Director, DGHS and Program Manager (PM), National Newborn Health Program (NNHP) & Integrated Management of Childhood Illnesses (IMCI) with his entire team, Dr. Sabina Ashrafee Lipi, Deputy Program Manager (Training & Child Injury), Dr. Md Jahurul Islam, Deputy Program Manager (Newborn Health- IMCI), Dr. Ashfia Saberlin, Deputy Program Manager (Monitoring & Data Quality- IMCI), Dr. Husam Md. Shah Alam, Deputy Program Manager (Coordination & Logistics) attended the program.

Dr. Ahmed Ehsanur Rahman, Associate Scientist at MCHD of icddr,b presented the journey of project development process, updating IMCI implementation package, introducing Pulse oximeter in the routing IMCI structure, stakeholder engagement in Kushtia and finally project findings. The data collection had started in December 2020 and was completed in July 2021. The methods of data collection were included independent observation of the

use of pulse oximetry by IMCI service providers, re-assessment of oxygen saturation by study staffs, interview of the caretakers of the sick children, phone follow up of the study participants on day 2 and day 14 and data extraction from IMCI registers. A total of 22 IMCI service providers and 1680 children aged 2-59 months visiting IMCI corners of 12 health facilities of Kushtia with cough and difficulty breathing participated in the data collection.

Dr. Ehsanur informed that around 24000 children die due to pneumonia in Bangladesh annually, among them 50% die in hospital settings. He emphasized to introduce pulse oximeter in routine system so that healthcare providers could instantly assess the oxygen saturation level of hypoxaemic children, manage accordingly and reduce pneumonia related mortality.

In this dissemination workshop, key discussion point were the advancements of new methods and use of pulse oximetry by the service providers at the IMCI service corner. Dr. Muhammad Shariful Islam expressed his interest about pulse oximeter. In addition, he gave special importance on training to ensure skillness of the human resources at the IMCI corner. The team also discussed the number of successful referrals from the IMCI corner. Dr. Jahurul emphasized importance and necessity of in-patient data recording and to develop a patient register to capture this information. During the concluding session, Dr. Ehsanur emphasized the need for developing a system for monitoring and feedback regarding the proper use of Pulse Oximeter at IMCI corner.

## UNICEF support to strengthen the capacity of Service providers on pediatric standards including safe and rational use of oxygen therapy for hypoxemia management COVID 19

COVID-19 has had an immediate impact on the people of Bangladesh, infecting hundreds of thousands of people and taking several thousand lives. The pandemic is impacting the poorest and most vulnerable in Bangladesh with the greatest severity. Access and utilization of health services reduced significantly during the first three months of the spread of COVID-19 in Bangladesh. For example, Bangladesh reported a reduction of 41% in Ante-Natal Care (ANC) services during March-April 2020 compared to the same period in 2019, and a 31% reduction in institutional delivery during April-May 2020, 38% reduction in SCANU services, 62% reduction in KMC services and 56% reduction in IMCI services compared to the same period in 2019. The pandemic had shown where gaps in the health sector require support to become pandemic-resilient. It highlights the need for data-driven systems to inform evidence-based policy analysis and prioritization of groups for access to services.

To mitigate the impact of the pandemic on health outcomes, the Directorate General of Health Services (DGHS) of the Ministry of Health and Family Welfare (MOHFW) with support from UNICEF and other partners conducted a Health Facility Preparedness and Readiness assessment for the COVID-19 response at 120 health facilities including specialized, medical college hospitals, district hospitals, upazila health complex, NGO, and private health across eight divisions of the country.

The assessment investigated critical care management and access to essential supplies related to the COVID19 response. It found that 88% of the doctors were not trained on COVID-19 case management including critical care, and only 70% of the facilities had the necessary critical care guidelines for COVID-19. It also found that 70% of the facilities did not have adequate oxygen infrastructure including oxygen plants, LMO systems, oxygen concentrators, pulse oximeters, or other essential oxygen equipment

The National newborn Health Program (NNHP) and IMCI with support from UNICEF and USAID has introduced an initiative called **“Improving newborn and pediatric Quality of Care through improved availability and timely access to safe provision of medical oxygen”** in 250 bed Tangail General Hospital and Chattogram Medical College Hospital to introduce the newborn and pediatric standards of QoC and ensure rational use of oxygen therapy including access to safe Oxygen.



Photo Credit: Save the Children

The objective of this initiative was to

1. Improved system and capacity of health facilities for ensuring evidence-based inpatient newborn and pediatric quality of care with safe and effective oxygen therapy in compliance of 'Do No Harm' principle;
2. Improved capacity of the service providers for administration and monitoring of safe and effective oxygen therapy adherence to standards and protocol

Through this project, partnerships were strengthened with the NNHP and IMCI programs and an action plan was developed, resulting in the joint launch of a national guideline and training module for oxygen therapy and pediatric QoC standards under the leadership of NNHP, both of which were endorsed by the national curriculum approval committee.

With immediate initiative taken by NNHP & IMCI, technical committee was established under DGHS with representation of professional bodies, QI technical experts, and partners, who led the development of the guideline and training package, and supported the roll-out of capacity development activities for doctors and nurses from the two selected facilities, and subsequently it was scaled up to 13 districts. Till now, more than 600 doctors and nurses from 104 facilities of 13 districts received the training and managing the hypoxemic newborn and children following the WHO protocol.

To improve the quality of care for rational use of oxygen for management of hypoxemia among the newborn and children, Routine daily case monitoring chart for newborn and pediatric cases have been updated with oxygen monitoring indicators and introduced in SCANU and pediatric ward and doctors and nurses were oriented on how to monitor the children using the checklist. It has improved the number of screening of oxygen saturation level with pulse oximeter which was not monitored before.

To sustain the quality of care for hypoxemic children, NNHP & IMCI initiated the routine monitoring system and included Oxygen monitoring indicators in DHIS2 with support from UNICEF an MIS team of DGHS. Currently 104 facilities from 13 districts are reporting on the following indicators in DHIS 2.

NSU/SCANU data set:

- **Number of newborn with oxygen saturation measured with a pulse oximeter**
- **Number of newborn with hypoxemia**
- **Number of newborn with hypoxemia received oxygen therapy**

IMCI:

- **Number of children with oxygen saturation measured with a pulse oximeter**
- **Number of children with hypoxemia**

The results indicated a positive changes in monitoring and management of sick newborn and children with hypoxemia in SCANU and pediatric indoor services including IMCI corner.



Photo Credit: Save the Children



Photo Credit: Save the Children

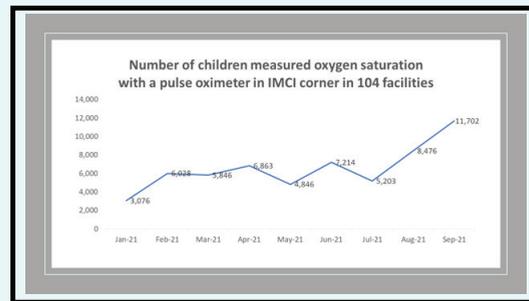
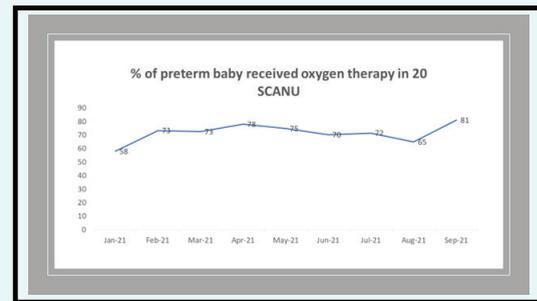
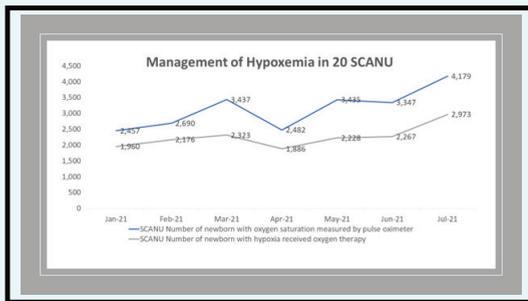
## Way forward

In Bangladesh, 24,000 children die every year due to pneumonia and among them 13.5% die due to hypoxemia. In addition, the highest cause of newborn death in SCANU is due to hypoxemia. If the pediatric standard and capacity of oxygen therapy for management of hypoxemia can be ensured, facility can be ready with safe access to oxygen including availability of pulse oximeter for timely screening and assessment of children with hypoxemia, one third death can be reduced.

NNHP& IMCI has included oxygen therapy and management of hypoxemia in MNCAh operational plan for

further scale up with special focus on the followings-

- Develop a long-term sustainable scale up plan through sector program
- National capacity development on newborn and pediatric standard including safe and rational use of oxygen for hypoxemia management
- Create national and divisional training pool.
- Ensure equipment for screening and uninterrupted oxygen supply at all facilities
- Established routine monitoring and mentoring mechanism



## NICU in Dr. M R Khan Shishu Hospital & Institute of Child Health: A New Start

Dr. M R Khan Shishu Hospital & Institute of Child Health, one of the busiest hospital, teaching and training institute of Dhaka city has recently started its Neonatal Intensive Care Unit (NICU) from 30th June 2021.

Pioneer of Modern Neonatology in Bangladesh, renowned Professor Dr. Mohammad Shahidullah inaugurated the NICU. This is a low cost 30 bedded NICU supported by UNICEF, Bangladesh and equipped with all necessary instrument essential for managing sick newborns such as incubators, portable warmers, pulse oximeters, syringe pumps, CPAP machines and ventilator. Doctors and nurses are specially trained in this field and capable of managing these sick babies. Kangaroo mother care service is being provided here to the stable low birth weight newborns. Invasive techniques like exchange transfusion, sampling of arterial blood are available here. Neonatology unit is also dedicated in providing all national trainings on newborn care held in their hospital. Since starting of the journey, it is

providing data to DGHS for SCANU and KMC services.

Neonatal Intensive Care Unit of Dr. M R Khan Shishu Hospital & ICH is devoted to serve the community and will always work with the vision of Late National Professor. Dr. M R Khan Sir.



Photo Credit: Save the Children

## Optimizing place of treatment and antibiotic regimens for young infants presenting with signs of possible serious bacterial infection (PSBI Trial)

Neonatal mortality rate has substantially declined over the last few decades, but still an estimated 2.5 million neonatal deaths occur worldwide annually. In Bangladesh, the neonatal mortality rate is 30 per 1,000 live births; it accounts for 67% of all under-5 deaths. Neonatal infections account for about 35% of all neonatal deaths in South Asia and sub-Saharan Africa. Current WHO guidelines recommend that young infants (0-2 months) with Possible Serious Bacterial Infection (PSBI) should be managed in a hospital with injectable antibiotics and supportive care. But when referral to hospital is not feasible for young infants with clinical severe infection (CSI) and no sign of critical illness, the WHO guideline recommends outpatient treatment with injectable gentamicin for 2 days and oral amoxicillin for 7 days. Implementation research on the above guidelines has also demonstrated that outpatient treatment is safe and effective when hospitalization is not feasible. But it is not possible, however, to conclude that out-patient treatment of young infants with CSI is superior

to in-patient treatment from the available observational data.

To conclude this unsolved issue and as well as upgrade the IMCI guideline for PSBI treatment of young infants WHO is coordinating a multi-country study named “Optimizing place of treatment and antibiotic regimens for young infants presenting with signs of possible serious bacterial infection.” (PSBI study). This study is conducting in seven sites of six countries (Bangladesh, Ethiopia, 2 sites of India, Nigeria, Pakistan, and Tanzania).

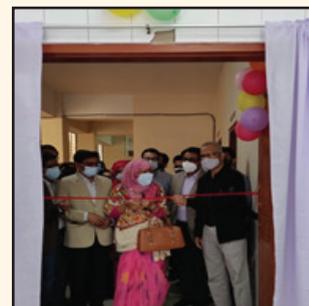
The overall goal of this study is to generate knowledge that will allow us to hospitalize only those young infants (0-59 days) with possible serious bacterial infections (PSBI) who need hospitalization and identify infants who can be treated safely on outpatient basis. This study will also help us to identify infants who need hospitalization but improve early and can continue their treatment at home.



Study Physician of PSBI study assessing young infant in study hospital



Honourable Program Manager, NNHP&IMCI, DGHS visiting “Young infant corner” of Zakiganj Upazila Health Complex



Inauguration of “Young infant corner” in Zakiganj Upazila Health Complex

Photo Credit: Save the Children

There are two open-label, two-arm, individually randomized controlled trials within this study. Trial-1 will include young infants with only one low-mortality risk sign of CSI [fast breathing in 0-6 day old babies, severe chest indrawing, high body temperature ( $\geq 38.0^{\circ}\text{C}$ )] presenting to outpatient/emergency department of a hospital. Eligible young infants will be randomized in two arm: 1) outpatient treatment arm with 2 days injectable Gentamicin and 7 days oral Amoxicillin, 2) inpatient treatment arm with injectable Ampicillin and Gentamicin for 7 days.

Trial-2 will include young infants with a moderate-mortality risk sign [low body temperature ( $<35.5^{\circ}\text{C}$ ), not feeding well/stopped feeding well and movement only when stimulated] or two or more signs of CSI who clinically improve 48 hours after initiation of treatment and have a negative CRP test. Eligible young infants of Trial-2 will be randomized in two arm: 1) discharged and received oral

amoxicillin for next 5 days at home and 2) continue inpatient treatment arm with injectable Ampicillin and Gentamicin for next 5 days. Study team will continue follow up of the enrolled infants in both trials for 15 days to measure clinical outcome of both treatment arms.

With support from NNHP & IMCI of DG health, Projahnmo Research Foundation is conducting this study in four hospitals of Sylhet Division: Zakiganj Upazila Health Complex, Sunamganj District Hospital, Moulvibazar District Hospital and Habiganj District Hospital.

For this study, Projahnmo Research Foundation under guidance of Directorate General of Health Services established a “Young infant corner” in Zakiganj Upazila Health Complex to ensure minimal care (Thermal care, Respiratory care and Nutritional care) of hospital admitted young infants.

## Barishal Divisional Progress Review Workshop on Newborn and Child Health Services held

NNHP & IMCI program with the support of Tackling Pneumonia Project in Bangladesh, Save the Children, organized Barishal divisional progress review workshop on Newborn and Child Health services. The workshop took place at Director (Health) Barishal Division Conference room 21 October 2021.

Performance of key newborn and child health indicators of operational plan (OP) were reviewed and discussed with the divisional and district level managers using the DGHS public dashboard for newborn and child health. District Health Managers (CS, Hospital Superintendents) presented their district performance and challenges with probable way of solution. The health managers were also oriented on the e-version of the NNHP monitoring checklist. An



Photo Credit: Save the Children

android app was installed in the mobile phones of the managers for using this checklist during their routine monitoring visits.

## USAID's MaMoni MNCSP supported establishment of Sheikh Russel Regional Training Center for Maternal and Newborn Health at Bangabandhu Sheikh Mujib Medical College, Faridpur

USAID's MaMoni MNCSP along with Bangabandhu Sheikh Mujib Medical University (BSMMU) supported MNC&AH program of DGHS to establish a Regional Training Center for Maternal and Newborn Health (MNH) at Bangabandhu Sheikh Mujib Medical College, Faridpur. This training center will strengthen national capacity to deliver quality MNH services at scale. Decentralization of the training centers will also reduce the additional pressure of conducting training at the central institutions and can be utilized by different government programs and stakeholders to provide competency based MNH related training. The project also provided necessary training logistics and supported to develop CNCP, KMC and clinical mentorship resource pool at the training centers.



Photo Credit: Save the Children

Prof. Dr. Mohammad Shahidullah, Professor of Neonatology, BSMMU; Chairperson, NTWC-NBH & President- BMDC; Dr. Md. Shamsul Haque, Line

Director-MNC&AH, Dr. Muhammad Shariful Islam, Program Manager-NNHP & IMCI, Dr. Farhana Akter, Project Management Specialist, USAID, along with Dr. Umme Salma Jahan Meena, Chief of Party, USAID'S MaMoni MNCSP, Save the Children attended the inauguration ceremony of the training center and officially handed it over to the authority on September 28, 2021. Since its inception, a total of 87 health managers received training from this training center.

## USAID's MaMoni MNCSP engaging private sector for improving quality of sick newborn care at SCANU in Noakhali District

To ensure proper management of sick and critically ill newborn, Ministry of Health and Family Welfare of the Government of Bangladesh with the support from the development partners (UNICEF, USAID's MaMoni MNCSP, JICA etc.) established 48 SCANUs in 42 districts and planned to scale this up in all 64 districts by 2023 under 4th HPNSP. Bangladesh has made remarkable progress towards reducing neonatal mortality in last decade by improving the percentage of institutional deliveries, according to BDHS-2017 fifty percent live births were delivered at health facilities among them 36% happened in private and NGO facilities. Though private and NGO facilities are contributing around three-fourth of the country's facility deliveries, but quality gap persists around the continuum of maternal and newborn care.



Photo Credit: Save the Children

A 12 bed SCANU at Noakhali district hospital has been providing sick newborn care since its inception in 2012. In 2020, total 650 newborn received treatment among them 82% were out-born, Bed Occupancy Rate was 114%, Case fatality Rate was 24% among them 80% were out-born. Verbal autopsy of all the newborn deaths revealed some key factors- delayed referral from private facilities, no referral linkage, high incidence and cluster of birth asphyxia in some private clinics.

To address the issue, USAID's MaMoni MNCSP supported local health authority to organize a meeting with private hospitals and NGO clinics titled "Reducing SCANU Case Fatality Rate at Noakhali District hospital with Private Hospital Owners/Management" which held on 16 September 2021 at Civil Surgeon's office Noakhali. The key meeting participants were Civil Surgeon – Noakhali; Superintendent and Pediatric Consultant from Noakhali District Hospital; President - BMA, Noakhali; Owners from different private hospitals/clinics of Noakhali district; MaMoni district team.

Key decisions taken in the meeting:

- Sharing private hospital/NGO clinics will report their service data from now onwards regularly to the CS office.
- Private clinic owners expressed that they want to establish new SCANUs and increase districts capacity to provide sick newborn care
- Formation of a monitoring team comprising of Consultant – Pediatrics (DH); Sr. Manager MNHQI, MaMoni MNCSP and Nursing in-charge (DH) to visit private clinics to monitor their service quality
- Arranging learning visit by MaMoni and district health authority for the private clinic at the district hospital

**List of Contributors:** WHO, UNICEF, icddr, b, Projonmo Foundation and Save the Children International

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