PROJECT VISHWAAS
BREATH OF HOPE

Setting the global benchmark for quality management of tackling childhood pneumonia in India

Philips Foundation PHILIPS ZMQ Technology for Development Save the Children

CONTENT

Philips Foundation

The Philips Foundation help develop low-cost, easily accessible solutions that provide access to care for under-served /underprivileged communities. Together with partners from selected non-governmental and governmental organizations, as well as with social entrepreneurs, the foundation aims to drive system change, resulting in measurable social impact. The Foundation benefits from Royal Philips' expertise and knowledge and resources.

PHILIPS

Philips India through its Corporate Social Responsibility is committed to improve access to care for the vulnerable and underserved communities. The aim is to ensure that these communities derive the maximum benefits through our interventions, which are implemented in collaboration with multiple NGO partners and stakeholders across different states in India.

ZMQ
Technology for Development

ZMQ is a non-profit organization which creates and implements practical technology linked tools & solutions to empower communities by providing timely information and connecting them with life-saving services, thus achieving sustainable development. ZMQ's model combines social mission with technology to maximize the impact of health, education and livelihood interventions.

Save the Children

Save the Children works in 120 countries globally and across 20 states in India for children's rights - to inspire breakthroughs in the way the world treats children, and to achieve immediate and lasting change in their lives. It is determined to build a world in which every child attains the right to survival, protection, development and participation. It delivers immediate and lasting improvement to children's lives worldwide.

Together with Philips, Save the Children (SC) is keenly striving to address the silent emergency of childhood pneumonia in India, one of the largest contributors of under-five mortality in the country. The Integrated Global Action Plan for Pneumonia and Diarrhoea (GAPPD) set forth an ambitious goal to end preventable pneumonia and diarrhoea deaths by 2025. Our integrated approach aligns with this, and the Government of India's initiatives for reducing under-five mortality from pneumonia by targeting major direct causes like undernutrition, poor hygiene and poor sanitation.

The two-year intervention was carried out as a four-way partnership between Philips Foundation, Philips India, the Government Health System and Save the Children. Through this initiative, aligned with SC's Theory of Change, our aim is to increase access to pneumonia care by strengthening home and community case management; improve quality of care at public health facilities; increase demand for pneumonia interventions by raising consumer awareness; and drive uptake of expanded treatment through evidence-informed advocacy.

The Burden of Childhood Pneumonia in India

One child dies every 4 minutes due to pneumonia in India

India has the highest burden of childhood pneumonia in the world, both in terms of morbidity and mortality.

140,000[1]
children die due to pneumonia annually

30 million[1]
new cases of childhood pneumonia reported every year,

0.22[2]
episodes per child per year

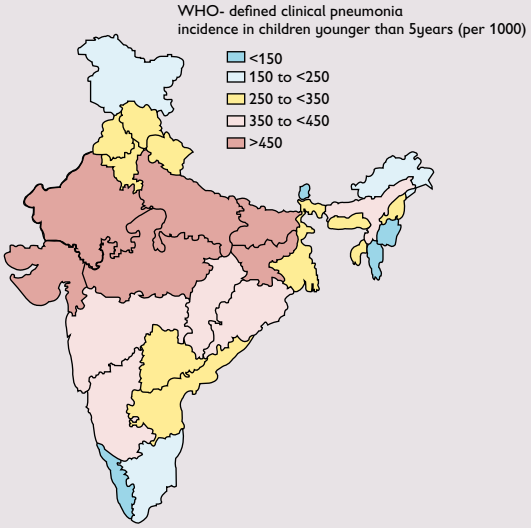
3 million(10%)[1]
severe cases annually

5.7%[3]
mortality rate per 1000 live births caused by pneumonia

15%[4]
of under 5 deaths in India due to pneumonia

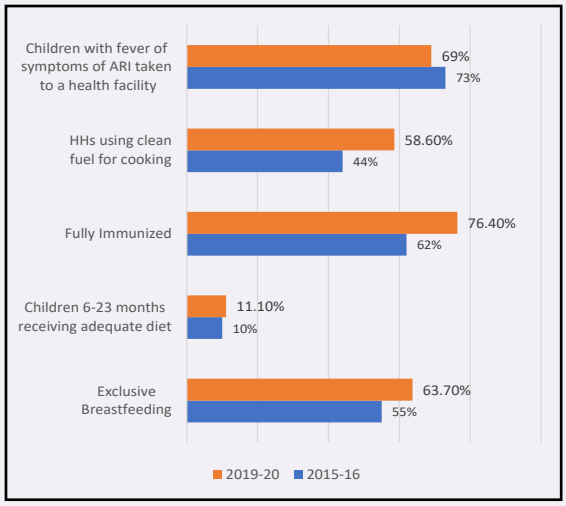
Four states account for more than half of the under 5 pneumonia cases

Uttar Pradesh, Bihar, Madhya Pradesh, and Rajasthan together contribute to more than 50% of country's total reported pneumonia cases in under-5 children.



Source: Lancet ARTICLES| VOLUME 4, ISSUE 9, P678-687, SEPTEM BER 01, 2020 DOI:https://doi.org/10.1016/S2352-4642(20)30129-2

Coverage of Pneumonia Interventions in India

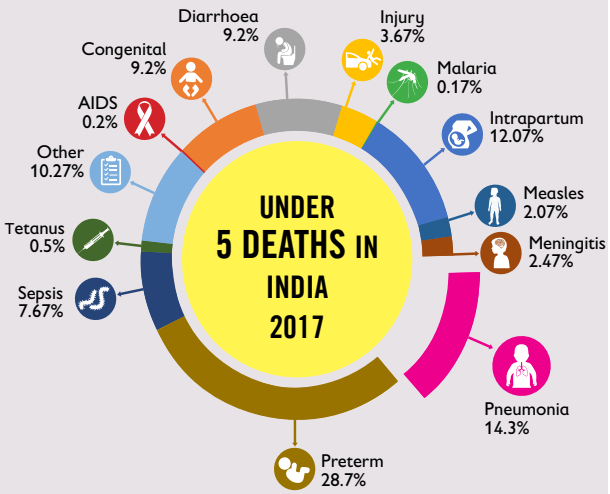


Significant reduction in childhood deaths due to pneumonia is needed to achieve the under 5 mortality targets

India aims at reducing under-five mortality from 39/1000 live births in 2016 to 23/100- live births by 2025 (National Health Policy 2017). Towards achievement of this target, reduction in mortality from childhood diseases is prioritized, including that from pneumonia.

5.7[5]
under 5 mortality in 2016 from pneumonia

>3[5]
under 5 mortality target in 2025 from pneumonia



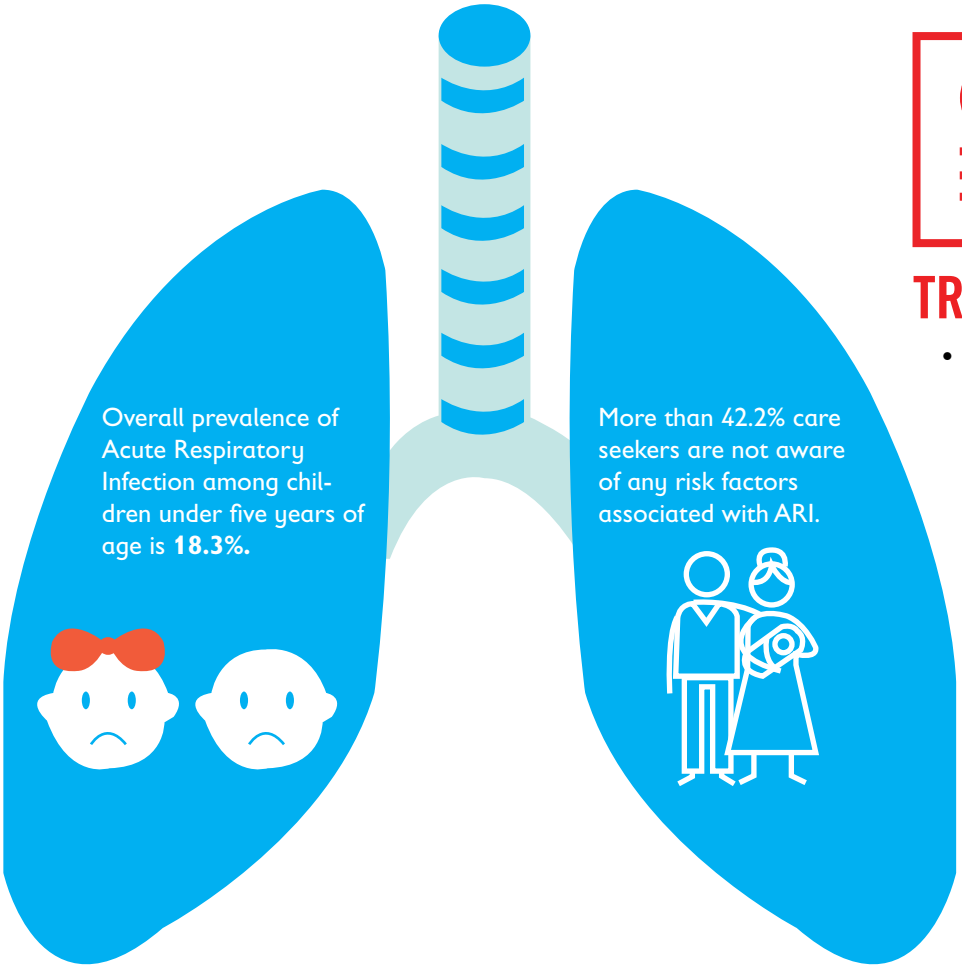
Source: Estimates generated by the WHO and Maternal and Child Epidemiology Estimation Group (MCEE) 2018

1. Lancet Volume 17, November 2017, Estimates of the global, regional and national morbidity, mortality, and etiologies of lower respiratory tract infection in 195 countries: a systematic analysis for the Global Burden of Disease Study 2015
2 Pneumonia estimates based on census 2011, SRS 2017 and pneumonia morbidity data from Lancet Volume 17, November 2017
3 Pneumonia estimates based on census 2011, SRS 2017 and pneumonia mortality data from Lancet Volume 17, November 2017
4 Estimates generated by the WHO and Maternal and Child Epidemiology Estimation Group (MCEE) 2018
5. India's Integrated Action Plan for pneumonia and diarrhoea (IAPPD)

Programmatic and Operational Gaps (as per PPDT Framework)

DIAGNOSIS

- Manual counting of child's breath is difficult
- Currently used techniques are not accurate and may lead to miscounting.
- Poor ability/skills of health workers to detect, refer and manage pneumonia including predictors of severity.



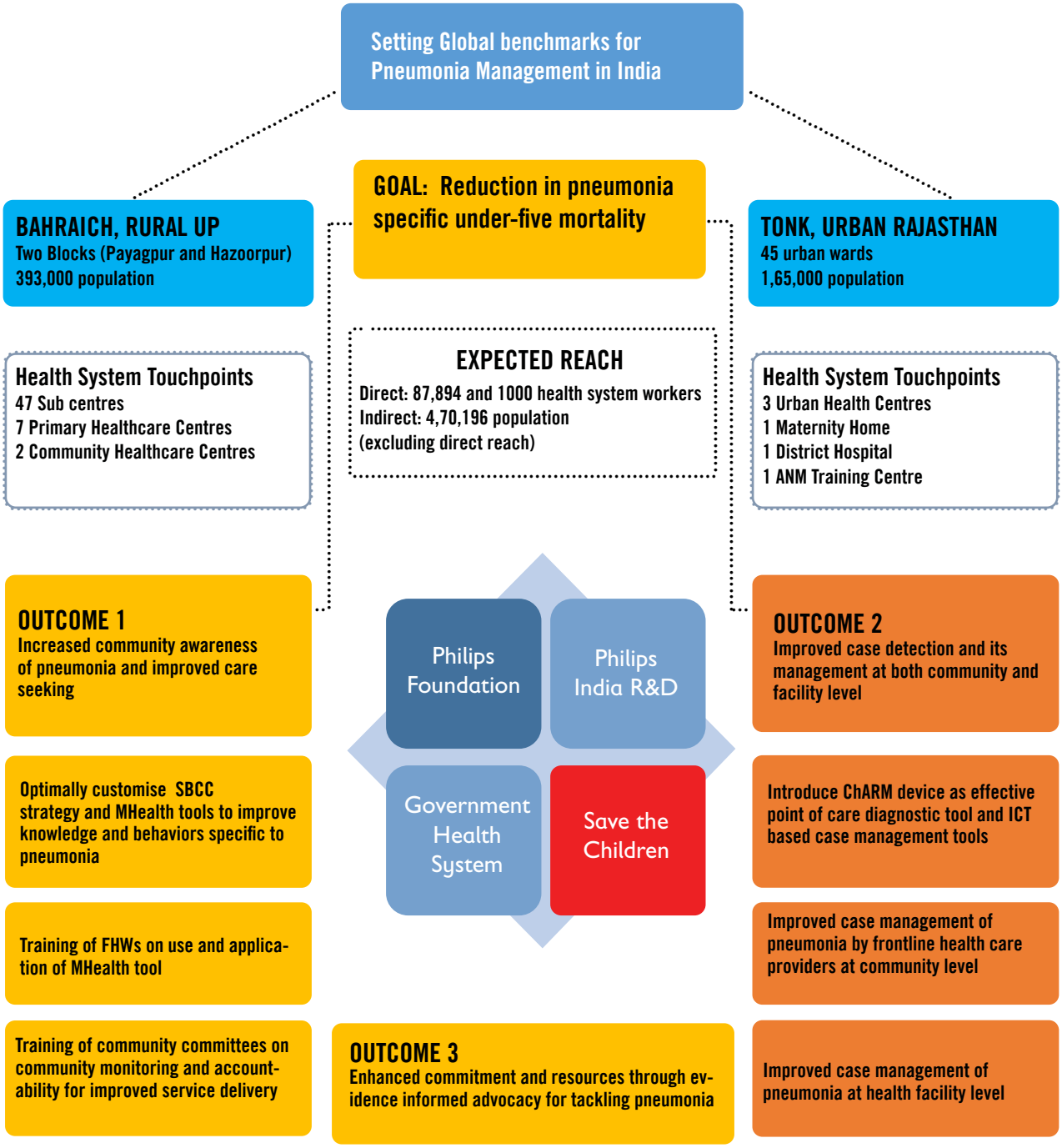
TREAT & MANAGE

- Correct case management of pneumonia at community and facility level is challenging in resource poor settings

PREVENT & PROTECT

- Low awareness at individual/community level vis-a-vis:
  - » Behavioural needs: Importance of clean fuels, IYCF and nutrition practices, toilet use, hand washing, safe drinking water, sanitation and immunisation
  - » Care seeking behaviour: access and quality
- Resistance towards use of newer technologies/diagnostics and research on behaviour change unless approved by local competent authority,
- Poor feedback mechanism for data use for accountability

INTERVENTION MODEL



PROJECT VISHWAAS LOG FRAME

Framework for Reduction in Pneumonia Specific Under 5 Mortality in India

Goal: Reduction in Pneumonia specific under 5 mortality in India					
	Outcome 1: Increased awareness of pneumonia and improved care seeking		**Outcome 2**: Improved case detection and its management at both community level and facility level		
Intermediate Results	IR 1.1 Increased knowledge and awareness among HHs on identification and management of pneumonia and its risk factors	IR 1.2 Improved care seeking behaviour for pneumonia	IR 2.1 Improved case management of pneumonia by frontline health care providers at community level	IR 2.2 Improved case management of pneumonia at health facility level	IR 2.3 Feasibility and Acceptability of point of care diagnostic device (ChARM) to improve identification and classification of pneumonia as per national guidelines
Key Indicators	→ Percentage of HHs with knowledge of signs of pneumonia in children under 5 years of age → Percentage of HHs with knowledge on indoor air pollution and its effect on pneumonia → Percentage of HHs aware of handwashing with soap and water at critical times → Percentage of HHs practicing handwashing with soap and water at critical times → Percentage of MCHN days with focused counselling and education session on pneumonia → Percentage of HH who were counselled on pneumonia using MHealth tool	→ Percentage of children under 5 with symptoms of ARI who received antibiotics → Percentage of children under 5 years of age with acute respiratory infection taken to a health facility → Percent of children (12-23 months) fully immunized → Percentage of children (12-23 months) immunized with three doses of PCV → Percentage of children (12-23 months) with three doses of pentavalent vaccine → Percentage of children exclusively breastfed for 6 months → Percentage of children initiated complimentary feeding	→ Percentage of treatment coverage for children with suspected pneumonia, including care by an appropriate healthcare provider and antibiotics → Percentage increase in identification of pneumonia cases → Percentage of pneumonia cases adequately managed by frontline health workers → Percentage of pneumonia cases referred to health facility → Number of supportive supervision visits conducted at field → Number of trainings conducted and number trained on ICT based tool	→ Percentage of children with suspected pneumonia who received treatment with antibiotics / oxygen /both at health facility → Percentage of severe pneumonia cases referred to higher health facilities → Percentage of health facilities with adequate supply of antibiotics for pneumonia treatment → Percentage of health facilities with adequate supply of oxygen for pneumonia treatment → Percentage of health facilities having follow up mechanism after discharge from health facilities → Number of supportive supervision visits conducted at health facilities → Number of trainings conducted on use of ICT based case management tool	→ Acceptability - Satisfaction with the FHWs and perceived ease of use of the ChARM device → Feasibility - Extent to which the use of ChARM device are compatible with resources and trainings → Fidelity - Adherence to program protocol and quality of delivery → Usability - Sustained use at health service delivery points and imbibed in package of pneumonia interventions → Engagement - Commitment, involvement and accountability of program implementers with the implementation

PROJECT VISHWAAS LOG FRAME

Key outputs (KOPs)	KOP 1.1.1 : Formative research for behaviour change needs conducted KOP 1.1.2: MHealth tool on pneumonia associated risk factors and counselling on pneumonia identification, management and treatment for care seekers developed and piloted KOP 1.1.2 : FHWs trained on use and application of MHealth tool KOP 1.1.3 : MHealth tool used as job aid by FHWs at various platforms and meetings (home visits, group meetings, VHNDs days) KOP 1.1.4: Child champions identified and trained for peer learning	KOP 1.2.1 : Number of community facilitators trained on MHealth tool on pneumonia associated risk factors and counselling KOP 1.2.2 :Village / Urban Health Nutrition and Sanitation Committees trained on community monitoring and accountability tools for improved service delivery KOP 1.2.3 : MCHN days equipped with pneumonia counselling and management sessions KOP 1.2.4 : m-based live application on counselling and identification of suspected severe pneumonia cases	KOP 2.1.1: ICT based case management tool for informed decision making at community level developed for FHWs KOP 2.1.2 : Training package on ICT based case management tool rolled out in intervention area KOP 2.1.2.1 : Master trainers and FHWs trained on ICT based case management tool KOP 2.1.2.2 : Refresher trainings conducted for FHWs KOP 2.1.3 : Supportive handholding visits conducted in field KOP 2.1.4: FHWs conducting follow up visits of susceptible pneumonia cases KOP 2.1.5 :ANMs with nil stock out of antibiotics for treatment of susceptible pneumonia cases KOP 2.1.6 :ASHAs equipped with supplies for management of pneumonia	KOP 2.2.1 : ICT based case management tool for informed decision making at facility level developed for medical officers and staff nurses KOP 2.2.2 : Training of medical officers and staff nurses conducted on use and application of ICT based case management tool at facility level KOP 2.2.3 : Facilities assessed for supply and logistics required for management of pneumonia at facility level KOP 2.2.4 : Facility wise action plan for strengthening supply and logistics (pneumonia related) developed in consultation with health department KOP 2.2.5: Health facilities monitoring their supply and logistic action plan KOP 2.2.6: ICT based tool developed for tracking and informed decision making on pneumonia KOP 2.2.7: Health facilities using the ICT tool for tracking and informed decision making	KOP 2.3.1 Parameters of usability, feasibility and acceptability of ChARM device finalised KOP 2.3.2: Training package on use of ChARM device developed KOP 2.3.3: Study area FHWs trained on use of ChARM device for respiratory count KOP 2.3.4: Handholding and supportive supervision visit to FHWs using ChARM device KOP 2.3.5: Draft on usability, feasibility and acceptability of ChARM device by FHWs
Time frame	**24 months**	**24 months**	**24 months**	**24 months**	**12 months**
Intervention area	2 Rural Blocks of Bahraich district, Uttar Pradesh and Urban area of Tonk, Rajasthan	2 Rural Blocks of Bahraich district, Uttar Pradesh and Urban area of Tonk, Rajasthan	2 Rural Blocks of Bahraich district, Uttar Pradesh and Urban area of Tonk, Rajasthan	2 Rural Blocks of Bahraich district, Uttar Pradesh and Urban area of Tonk, Rajasthan	2 PHCs catchment area (rural), 2 UPHCS catchment area (urban)
Key Principles	Research in Indian settings on conclusive data on device accuracy	Extensive involvement with Government systems		Strategic engagement with Philips Employees	

KEY INTERVENTIONS

1. MHealth Pneumonia Tool

MHealth Pneumonia Tool designed to drive behavior change and sustain frontline health workers with standardized protocols to identify, classify, manage, refer and treat pneumonia in children under 5. The android based MHealth Pneumonia Toolkit developed with support of ZMQ, the technology partner piloted with 144 ASHAs and 26 ANMs in Tonk and Bahraich district.

1.A Case Management MHealth Tool designed as a bottom-up approach to enable case finding, screening, treatment & care and follow-up of pneumonia cases. The android toolkit is designed based on pneumonia (SAANS) guidelines and its design follows a complete case management algorithm starting from mapping of households, mothers/caregivers & children; identification, screening & categorization pneumonia patients among children under 5 years; Referrals, pre-referral services & counselling; follow- up tracker & case closure. Case Management MHealth tool for ASHAs and ANMs is open source and available free of cost on google play store

1.B SBCC MHealth Tool builds knowledge and awareness on the ground among key stakeholders and helps in achieving increased case finding. This android toolkit is an audio-visual interactive toolkit with iconic graphics, audio & videos, which provides customized information to the defined intended groups, for easier and quicker understanding of specific pneumonia related information. SBCC MHealth Tool is open source and free of cost available on google play store: *https://play.google.com/store/apps/details?id=com.zmq.sbcc*

2. Implementation research on Point of Care Diagnostic tool

Studies demonstrate that there is evidence to show that, when well trained; frontline health workers can adequately manage pneumonia cases at the community level. However, when training is deficient frontline health worker's skills in measuring respiratory rates and accurately classifying pneumonia remains a challenge.

In response to the call for innovation of pneumonia diagnostic, Philips has developed the Children's Automated Respiration Monitor (ChARM). The device placed around the child's belly and automatically measures respiratory rate and classifies fast breathing according to WHO guidelines. The technology is based on the Philips Intellivue cable less monitor which includes 3D accelerometry and signal processing of respiration-based biomechanics, launched in 2014 for adults and since then tailored for infants and children. With the technical support of King George Medical University, Lucknow, the device piloted to ascertain the feasibility and acceptability of point of care diagnostic device (ChARM) to improve identification and classification of pneumonia as per national guidelines.

KEY INTERVENTIONS

3. Introducing competency-based training of the health care providers on pneumonia management through the establishment of skill labs: Pneumonia Skill Lab serves as a prototype demonstration and learning facility for health care providers so that they develop desired competencies. They also aid in institutionalizing the usage of Standard Operating Procedures (SOPs) and adherence to technical protocols, so that they become a part of routine practice. Such skill based training labs have an edge over other didactic methods by providing the opportunity for repetitive skill practice, simulating clinical scenarios under the supervision of a qualified trainer.

4. Strengthening pneumonia management information system in the intervention geographies. The current recording and reporting system lacks to capture key determinants of managing pneumonia at field level. Project VISHWAAS in the line of SAANS Campaign guidelines, introduced pneumonia case management recording sheet, and reporting to ASHAs, ANMs, CHOs and health facility service providers, their capacity building, hand holding support in use of data and tracking the use of data in day-to-day work.

5. Strengthening pneumonia equipment, supplies and logistics among frontline health workers and health facilities. The health facilities and frontline health workers need basic supplies of drug like amoxicillin, weighing scale, thermometer, recoding and reporting registers for adequately managing pneumonia cases. Project VISHWAAS in discussion and consultation with key stakeholders supported in equipping the health facilities and frontline health workers with basic supplies needed to manage pneumonia cases. In addition, the frontline health workers ASHAs and ANMs and their supervisors are trained on supply chain management of pneumonia related supplies including amoxicillin.

KEY INTERVENTIONS

6. Supportive Supervision to enhance skill of frontline health workers on identification, classification, treatment, and referral and follow up of pneumonia cases in community settings. Supportive supervision is a process of helping staff to improve their own work performance continuously. It is carried out in a respectful and non-authoritarian way with a focus on using supervisory visits as an opportunity to improve knowledge and skills of health staff

7. Increase awareness on pneumonia and improve care-seeking behavior of Caregivers of under 5 years' children in intervention area. Design and develop social behavior change communication strategy to increase awareness among Caregivers on "recognize the signs and symptoms of childhood pneumonia and urgently seek treatment from a health care provider; believe that childhood pneumonia is life threatening, yet treatable with antibiotics.; know where to access quality treatment for childhood pneumonia; receive an appropriate diagnosis and treatment from a qualified health care provider; practices handwashing with soap at five critical times and safe disposal of child feces; create smoke free environment at home including clean cooking fuel; practice early and exclusive breastfeeding, complementary feeding; and receive complete immunization of their children including PCV vaccination".

8. Improved case management of pneumonia by frontline health care providers at community level: In line with SAANS Campaign technical guidelines on pneumonia, developing cadre of master trainers in Tonk and Bahraich and training of ASHAs and ANMs on pneumonia management with focus on identification, classification, treatment, referral, follow up and reporting of cases. Design communication strategy and products for frontline health workers to "correctly recognize pneumonia symptoms in young children; refer caregivers to qualified providers for severe pneumonia in young children; demonstrate accurate knowledge of correct diagnosis and treatment (dosage and duration) with amoxicillin for suspected pneumonia in young children; correctly recognize combating risk factors of pneumonia and demonstrate counseling on prevent and protect components of pneumonia".

PROJECT MILESTONE

Goal - Reduction in pneumonia specific under 5 mortality

% of children with symptoms of ARI

Baseline: 18.3%

Endline: 6.7%

IR 1.1 Increased knowledge and awareness among HHs on pneumonia and its risk factors

Percentage of HHs with knowledge of signs of pneumonia in children under 5 years of age

Baseline: 27.9%

Endline: 48.37%

Percentage of HHs with knowledge on indoor air pollution and its effect on pneumonia

Baseline: 34.2%

Endline: 75.06%

Percentage of HHs aware of handwashing with soap and water at critical times

Baseline: 40.3%

Endline: 78.2%

Percentage of HHs practicing handwashing with soap and water at critical times

Baseline: 8.4%

Endline: 44.62%

Percentage of MCHN days with focused counselling and education session on pneumonia

Baseline: 25.11%

Endline: 70.47%

IR 1.2 Improved care seeking behaviour for Pneumonia

Percentage of children under 5 with symptoms of ARI who received antibiotics

Baseline: 49.5%

Endline: 66.47%

Percentage of children (12-23 months) fully immunized

Baseline: 72.2%

Endline: 92.22%

Percentage of children exclusively breastfed for 6 months

Baseline: 43.8%

Percentage of children initiated complimentary feeding

Baseline: 61.5%

Endline: 69.7%

IR 2.1 Improved case management of pneumonia by frontline health care providers at community level

Percentage of treatment coverage for children with suspected pneumonia, including care by an appropriate healthcare provider and antibiotics

Baseline: 29.5%

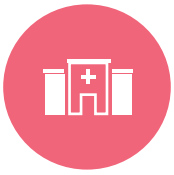
Endline: 68.8%

Percentage of ASHAs equipped with pre-referral dose of amoxicillin for management of pneumonia

Baseline: 0%

Endline: 62.5%

IR 2.2 Improved case management of pneumonia at health facility level

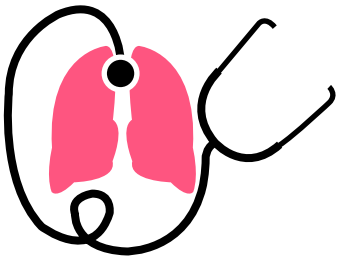


Percentage of children with suspected pneumonia who received treatment with antibiotics / oxygen /both at health facility

Baseline: 62.8%

Endline: 76.2%

RECOMMENDATIONS FROM PROJECT VISHWAAS



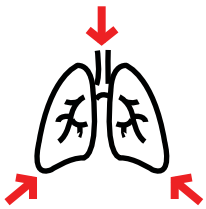
India has the highest burden of childhood pneumonia in the world, both in terms of morbidity and mortality. Around 140,000 children die due to pneumonia annually in the country. There are 30 million new cases of childhood pneumonia reported every year, with an incidence rate of 0.26 episodes per child-year. Approximately ten percent of these episodes tend to be very severe. Among children under-five years, pneumonia contributes to nearly a sixth (15%) of all deaths in India. With one child dying from pneumonia every four minutes. The reduction of under-five mortality from 39/1000 live births in 2016 to 23/1000 live births by 2025 is one of the prime goals of India's National Health Policy 2017. In order to achieve this goal, mortality due to childhood pneumonia needs to be reduced to less than three per 1000 live births from the current level of 5.7 per 1000 live births. At present, India has the largest population of children (<5 years) worldwide. To enable these children to have a healthy and productive life, it is imperative to mitigate the challenge of pneumonia through the implementation of multifaceted preventive measures. India is undergoing an epidemiological and demographic transition, represented by a growing burden of Covid-19 and lifestyle driven chronic and non-communicable diseases in the working population, while still grappling with infectious disease burden like pneumonia that is still a prolific killer, claiming the lives of several children every hour. The following section summarizes broad approaches and strategies that emerged from the implementation of Project VISHWAAS. These may be strategic to strengthen future action to manage pneumonia and reduce child morbidity and mortality in India.

POLICY AND FINANCING

Drive political commitment and action, especially at the subnational level, and mobilize sustainable financing across sectors.
Priority recommendation include

- Secure champions and broader support for pneumonia control across sectors
- Ensure localization, dissemination, and implementation of this strategy and other pneumonia-related policies at the subnational level
- Mobilize sustainable financial resources across multiple sectors to support pneumonia control efforts

COORDINATION AND CONVERGENCE

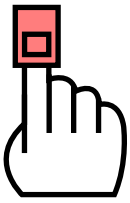


Strengthen coordination mechanisms to drive accountability and action around priorities within integrated programming. This would require pneumonia to be tackled at a larger level than just at the MoHFW, involving synchronization of efforts of other ministries such as the Ministry of Drinking Water and Sanitation, the Ministry of Petroleum & Natural Gas, the Ministry of Women and Child Development, and many others. Thus, there is a need for trans-sectoral convergence for comprehensive care with identified indicators for accountability and for monitoring progress. There should be good coordination between policy formulation and program implementation at District, State and Central levels for effective inter-sectoral coordination. Priority recommendations include

- Appoint implementation coordinator within Child Health Technical Working Group to integrate and amplify pneumonia control activities
- Develop an accountability framework for the strategy and integrate into broader newborn and child health efforts
- Ensure states have relevant coordination mechanism with appointed implementation coordinators to help drive accountability at state and local levels
- Strengthen linkages between national and state coordination mechanisms
- Strengthen convergence of sectoral programs and departments to address various preventable aspects of controlling pneumonia and scaling up essential pneumonia management interventions, such as: Swachh Bharat Abhiyan – Gramin - for improved sanitation practices; POSHAN Abhiyaan – for improved nutrition; UIP – for universal Immunization; Ayushman Bharat – for affordability of treatment, care seeking behaviour etc.
- Engagement of private health sector with public health system should be explored keeping in mind the local context

RECOMMENDATIONS FROM PROJECT VISHWAAS

USE OF 'POINT OF CARE DIAGNOSTICS' FOR PNEUMONIA DIAGNOSIS AND TREATMENT



Combination of several diagnostic and prognostic innovations into an integrated instrument could improve identification of pneumonia and its severity. Automated respiratory counters could help in early identification of pneumonia in resource poor settings. Pulse oximetry could transform the diagnosis of hypoxaemia in low-resource settings, ensuring that oxygen is used efficiently and rationally, easing timely referral decisions, reducing treatment failure rates, and decreasing health-care costs. Priority recommendations include

- Research and investment in use of point of care diagnostics for pneumonia treatment and management
- Equipping frontline health workers on use of digital tools to diagnose and treat pneumonia at community level

DATA AND INFORMATION SYSTEMS

Include pneumonia relevant metrics in health information systems to enable collection and use of high-quality data on disease burden and interventions. There is a huge gap in pneumonia reporting despite inclusion of few indicators in HMIS in the recent past. Our study found lack of recording and reporting of pneumonia cases at all levels of health care. The lack of reporting is a major issue that must be addressed to have stronger and more effective health systems responses. Also, decision makers and program managers should regularly use this HMIS data during monthly and quarterly child health reviews for informed decision making. Priority recommendations include

- Advocate for the inclusion of pneumonia relevant indicators in routine data collection via HMIS
- Strengthen aspects of data collection, analysis, and use most critical for pneumonia-relevant indicators at subnational and district levels

TECHNOLOGY ENABLED COMMUNITY PREVENTION AND CARE-SEEKING

Improve caregiver awareness and change behaviour to better prevent, recognize, and seek care for pneumonia. By harnessing the increasing presence of mobile phones among diverse populations, there is promising evidence to suggest that mHealth could be used to deliver increased and enhanced health care services to individuals and communities, while helping to strengthen health systems. MHealth interventions targeting Frontline Health Workers (FLHWs) and beneficiaries have the potential to improve performance of FLWs, reduce barriers to information and potentially change the behaviors of beneficiaries. While technology is an enabler for FLHWs to improve their service delivery, it also help overcome social and cultural barriers to bring about improvements in knowledge and health behaviors. Priority recommendations include

- Application of innovative digital tools (MHealth ,IVRS) to push behaviour change among caregivers of under 5 children
- Improve awareness across caregivers, household influencers, and the community on how to protect, prevent, recognize, and understand the potential severity of pneumonia
- Use community structures to reinforce pneumonia messaging, increase acceptance of interventions, and drive behavior change via engagement and follow up with mothers and caregivers
- Empower communities to own pneumonia control and ensure accountability

RECOMMENDATIONS FROM PROJECT VISHWAAS

SERVICE DELIVERY: INCREASE THE QUALITY AND COVERAGE OF PNEUMONIA CONTROL INTERVENTIONS WITHIN INTEGRATED SERVICE DELIVERY PROMOTING USE OF DIGITAL SOLUTIONS ACROSS PUBLIC AND PRIVATE POINTS OF CARE

Early case identification and management at community level is one of the key interventions for pneumonia control. Capacity building of FLHWs on identification of cases, classification and providing appropriate first line antibiotic(Amoxicillin) is critical and part of IMNCI strategy. Also, the FLHWs should be able to timely refer severe cases to higher level facilities for hospitalization. The health staff at hospitals should also be trained to provide quality standardised inpatient care. Plan should be made to provide continuous trainings to health staff using innovative approaches like use of skill labs, telemedicine and through online self-learning platforms. With training and appropriate technology support, community health workers can effectively diagnose and treat childhood pneumonia in the community and increase access to high-quality care. Most pneumonia deaths are due to severe (chest indrawing) pneumonia,and in many low-resource settings, referral to facilities is difficult and frequently does not occur. Therefore, case management of severe pneumonia at the community level is required. The digital tools support FLHWs in classification, treatment, referral and management of pneumonia cases with required decision-making and use of data in their hand. Project Vishwaas learnings suggest that mobile health (mHealth)-based applications and algorithms can facilitate FLHWs adherence to diagnostic and treatment guidelines. Key recommendations include

- Technology enabled case management of severe pneumonia at frontline health workers and health facility level
- Include pneumonia skill lab training in Pre-Service Education (PSE) program of Nursing and midwifery institutions to provide competency based training and eventually to improve pneumonia management skill of nursing cadre in a uniform and standardized manner.
- Make mandatory pneumonia skill lab training for Community Health Officer (CHOs) during their Certificate Program in Community Health (CCH) developed by IGNOU in collaboration with MoHFW, GoI with aim to improve their knowledge, skills and competencies in managing and leading pneumonia program through HWC-CPHC team.
- Reinforce efforts to scale routine immunization, IMNCI across states and especially those with high pneumonia burden
- Strengthen pneumonia control interventions within facility-based care, including integrated community case management

SUPPLY AND DISTRIBUTION

Scale up products required for pneumonia control—including vaccines, Amox DT, medical oxygen and pulse oximetry, and clean cooking fuels—via relevant supply chains. Key recommendations include

- Support local procurement of Amox DT and increase availability across public and private points of care
- Strengthen the distribution of vaccines to last-mile communities
- Strengthen the supply of pulse oximetry, oxygen, and related products at facilities
- Strengthen the supply of clean cooking fuels at the community level

Save the Children

National Support Office
Plot No 91, Sector 44, Gurgaon 122003, Haryana
www.savethechildren.in

www.facebook.com/india.savethechildren

@stc_india

www.instagram.com/savethechildren_india