

# Implementation and Coverage of the First Public Sector Introduction of Typhoid Conjugate Vaccine (TCV) – Navi Mumbai, India

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On behalf of the Navi Mumbai TCV Team

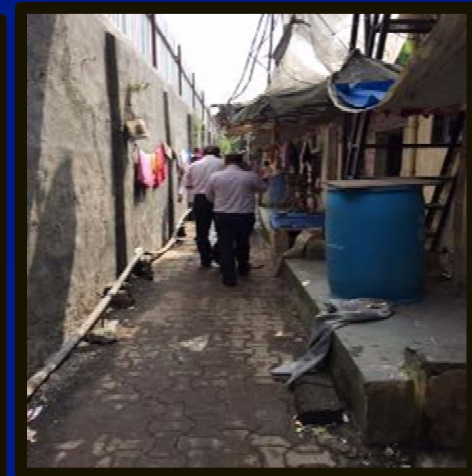
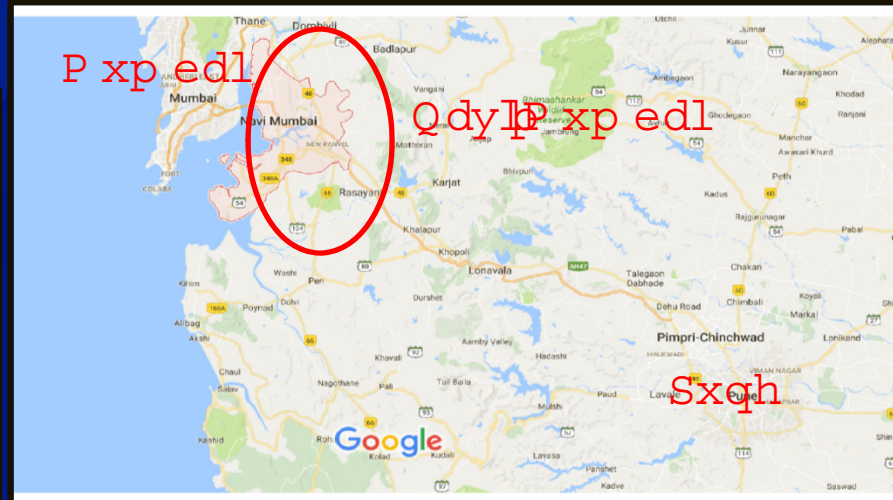


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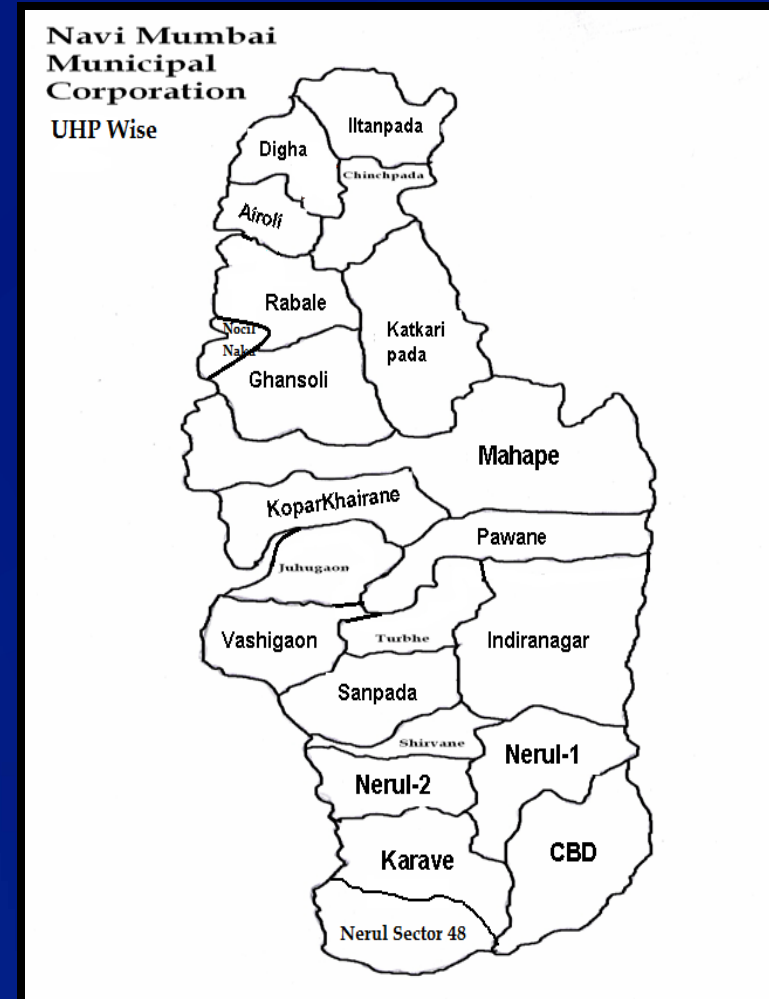


# Navi Mumbai, India (1)



# Navi Mumbai, India (2)

- Developed as a **planned city** in the 1970s
- Urban/suburban area
- 8/13 nodes under the **Navi Mumbai Municipal Corporation (NMMC)**
  - Population: 1.4 million (est.), <15 years = ~390,000
- 22 urban health posts (UHP) or urban primary health center (UPHC) areas
  - 9 designated as “high-risk” based on % population living in slums



# TCV Introduction and Evaluation Decision and Commitments

- Decision and financial commitment by NMMC (+ central and state government approvals)
- Vaccine donation (Bharat Biotech International Ltd.)
- Active local chapter of the Indian Academy of Pediatrics
- Partners' commitment for monitoring and evaluation
  - WHO-India, Indian Council of Medical Research (ICMR), Centers for Disease Control and Prevention (CDC), Stanford University, International Vaccine Institute
  - Local partners (hospitals and laboratories)
  - Others

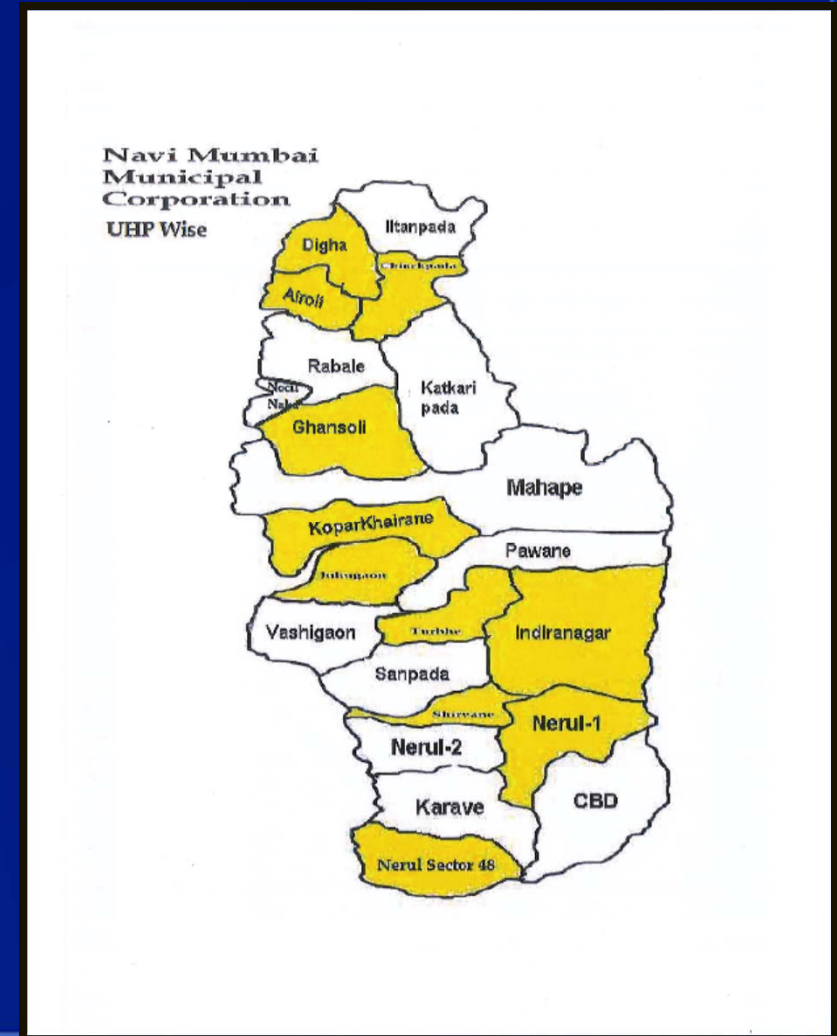


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# TCV Introduction by NMMC

- Implementation lead: NMMC
- Target population: 9 months – <15 years old children within the NMMC jurisdiction
- Strategy: Catch-campaign in 2 phases (2018, 2019) + routine
  - 11 UHPs in 2018. estimated target: 160,000 children
  - 11 UHPs in 2019
  - Introduction into the routine program (proposed starting 2019 – 2020)



# CAMPAIGN PLANNING AND IMPLEMENTATION

# Phase 1 (2018) Campaign Preparations

- **Trainings and capacity building**
  - NMMC staff: microplanning, campaign logistics, adverse events following immunization (AEFI) management
  - Field workers: headcount survey and social mobilization
- **Logistics**
  - 50,000 doses donated; rest purchased by NMMC
  - Needles and syringes donated by the Government of India
  - Preparation of AEFI kits and local AEFI committees at the UHP level
  - Biomedical waste management
  - Reporting formats (administrative coverage reporting)



# Phase 1 (2018) Campaign Microplanning

- Led by NMMC with technical assistance from WHO-India and CDC
- Use of existing immunization program plans and resources
  - Polio microplan for planning and headcount survey
  - Logistics and campaign plans adapted from the national measles-rubella campaign guidelines
- Strategy
  - Campaign days on weekends and public holidays (6-week period)
  - Catch-up during the weekdays at UPHC clinics
- Resources
  - Additional resources from the 2019 UPHCs
  - 1 outreach session for ~150 beneficiaries (health posts, routine immunization posts, clinics, residential society offices, community centers, others)



# Phase 1 (2018) Campaign Information, Education and Communication (IEC) and Crisis Communication (1)

- No mass media (due to the phased approach)
- Focus group discussions for messages (caregivers from different income levels, health workers and medical officers)
- Field communication strategy (leaflets and information booklets distribution 1 week before the campaign in each area; banners)
- Endorsement and support from the private sector



"Be Responsible" parent & make sure that your children from 9 months to below 15 yrs Get Typhoid vaccine to prevent your child from typhoid disease

**FREE !! FREE !! FREE !!!**

**TYPHOID IMMUNISATION CAMPAIGN**  
Beat Typhoid disease by vaccinating your child by Typhoid Conjugate Vaccine



Typhoid is Characterised by	Reasons for Typhoid	Typhoid Can lead to complications like
<ul style="list-style-type: none"> <li>• Fever</li> <li>• Headache</li> <li>• Fatigue</li> <li>• Abdominal Pain</li> <li>• Diarrhoea or constipation</li> </ul>	<ul style="list-style-type: none"> <li>• Eating of Contaminated food and water.</li> <li>• Open contaminated stool and urine through flies.</li> <li>• Unhygienic and uncleaned hand of infectious persons.</li> <li>• Personal and environmental uncleanness.</li> </ul>	<ul style="list-style-type: none"> <li>• Intestinal Perforation</li> <li>• Neuropsychiatric dysfunction</li> <li>• Hepatitis</li> <li>• Gall bladder disease</li> <li>• Secondary infection to bone, lungs &amp; heart</li> </ul>

NAVI MUMBAI MUNICIPAL CORPORATION Health Department

**केवल एक इन्जेक्शन से आप अपने बच्चों को टाइफॉइड से सुरक्षित कर सकते हैं !!!**  
नई मुंबई महानगरपालिका की नया से टाइफॉइड कंजुगेट टीका (TCV) बच्चों को से बचाने में निरुपम निरुपम, चलाए गए कुल 2-4L को पूरा होगा।

**विषमज्वर/टाइफॉइड क्या है ?**

- एक जुलूम के लक्षण हर वर्ष नई मुंबई में 8000-10000 लोग टाइफॉइड की संघर्ष में आते हैं। दुःख के अतिरिक्त समय बचने की होती है।
- भोजन और पानी में नए पत्रों को शामिल करना टाइफॉइड की संवेदनशीलता से टाइफॉइड का बर्तन और संक्रमण होता है।
- टाइफॉइड के लक्षण में बुखार, सिर दर्द, थकान और कमजोर होना शामिल है।
- टाइफॉइड का उपचार अंतिमोटीमल से करने में अधिक अंतःकरणों के अतिरिक्त बचने के कारण उपचार के मुठकाते होती है।

**टाइफॉइड कंजुगेट टीका क्यों दे रहे हैं ?**

- टाइफॉइड बुखार को प्रतिक्रिया करने का सबसे बेहतरीन और अधिकतम तरीका टाइफॉइड कंजुगेट टीकाकरण है।

**टिवर स्वास्थ्य संघटना (इन्फुएचू.ओ.) की तरफ से TCV टीका पूर्ण समय से और उपलब्ध टीकों में TCV को चुनना और उपरी दिखाना पर है।**

**TCV टीका कैसे दिया जाएगा ?**

- नवी मुंबई के 9 इलाकों में 14 वर्ष तक उम्र के बच्चों के लिए टाइफॉइड कंजुगेट (TCV) टीका शुरू करे नई मुंबई महानगरपालिका ने नई मुंबई के बच्चों के स्वास्थ्य में निवेश की पहल की है।
- भारत सरकार के अमर टीका की तरह नई मुंबई में TCV टीकाकरण करने में पूर्ण निवेश होगा।
- अन्य टीकाकरण के बाद सुझाए, टीका की उपलब्ध अथवा सुझाने में परिणाम लेने दिखाने हैं, वे ही परिणाम TCV के बाद भी दिख सकते हैं, लेकिन टीका देने में परिणाम नहीं रहे।

**मेरे बच्चे को TCV टीका क्या मिल सकता है ?**

- इन पहल पर लीके हुए टीकाकरण ही जन्म और उनके हुए लक्षण को मुक्त करने से इस 8-10 वर्ष तक टीकाकरण कर सकते हैं।

नवी मुंबई महानगरपालिकाच्या मोफत मोहिमेच्या लाभ घ्या.

आपल्या ९ महिने ते १५ वर्षांखालील मुलांना टायफॉइड कंजुगेट व्हॅक्सिन देऊन टायफॉइड घातून संग्रहित करा.

नवी मुंबई महानगरपालिका आरोग्य विभाग टायफॉइड कंजुगेट लसीकरण मोहिम माहिती पुस्तिका



डॉ. गणपती दत्त, का.प.नं. आयुक्त नवी मुंबई महानगरपालिका

डॉ. जयवंत दत्तकेच सुभार आयुक्त नवी मुंबई महानगरपालिका

लसीकरण दिनांक : \_\_\_\_\_  
पत्ता : \_\_\_\_\_

# Phase 1 (2018) Campaign Information, Education and Communication (IEC) and Crisis Communication (2)

- Media briefing by honorable NMMC mayor and commissioner
- Weekly newspaper coverage updates by NMMC
- Local agency for assistance with crisis communication planning, media monitoring and response readiness





# Phase 1 (2018) Campaign Implementation

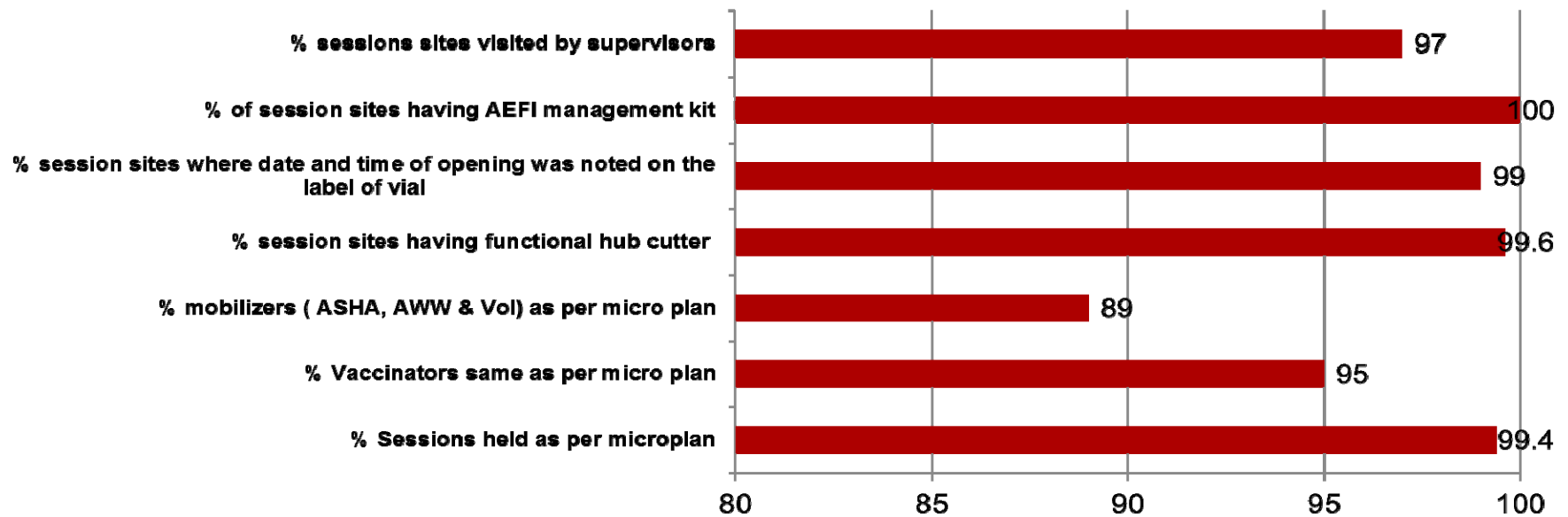
- TypBar-TCV
- July 14 – August 25, 2018
  - Except Aug 4 – 5 and Aug 15
  - Aug 19, 24, 25 – campaign mop-up days
- Campaign launch by Hon. Mayor of NMMC
- Vaccination cards provided to beneficiaries
- Reported administrative coverage = 113,420 children (~71%). Lower in high income communities
- Reported adverse events (AEFIs) per national AEFI guidelines – 222 (most were mild)



महामारी रोग	
<p>1. लसीकरण कर लेने के बाद अल्पकाल में लसीकरण करने से होने वाले लक्षणों को दर्शाते हैं।</p> <p>2. लसीकरण के बाद 2-3 दिनों में लक्षणों का होना सामान्य है।</p> <p>3. लसीकरण के बाद 2-3 दिनों में लक्षणों का होना सामान्य है।</p>	<p>4. लसीकरण के बाद 2-3 दिनों में लक्षणों का होना सामान्य है।</p> <p>5. लसीकरण के बाद 2-3 दिनों में लक्षणों का होना सामान्य है।</p> <p>6. लसीकरण के बाद 2-3 दिनों में लक्षणों का होना सामान्य है।</p>
<p>आपकी जानकारी के लिए, लसीकरण के बाद 2-3 दिनों में लक्षणों का होना सामान्य है।</p>	
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# Phase 1 (2018) Campaign Rapid Convenience Monitoring

## Sessions Site\* Quality Parameters



\*Total 495 sessions monitored across 11 UHPs

328 areas were selected for household monitoring visits and vaccination status was verified for 6560 children (86% found to be vaccinated – lower in high income areas)  
- 48 areas were recommended for mop-up activities



# TCV CAMPAIGN COVERAGE SURVEY

# Objectives

- Estimate coverage achieved through the public sector TCV program in phase 1 (2018 campaign) among the targeted age group
- Estimate prior typhoid vaccination coverage through the private sector

# Methods

- Community-based household-level stratified 2-stage cluster survey based on the current WHO Coverage Survey Guidelines
- 57 primary sampling units (PSU) with 24 households (HHs) per PSU (total of 1368 HHs)
  - Stage 1 (PSU): based on polio microplan team day (~100 – 150 households). Updated HH listing generated
  - Stage 2 (HHs): 24 HHs randomly selected from each PSU
- Eligibility: age-eligible and resident of one of the UPHCs where vaccination occurred in 2018.
- Coverage estimates and 95% confidence intervals (CIs) calculated (stratified cluster design and sampling weights accounting for the selection of clusters and households and household non-response)

# Preliminary Results

## Selected Household (HH) Characteristics

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# Preliminary Results

## Selected Respondent Characteristics

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# Preliminary Results

## TCV Coverage

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# Strengths & Challenges/Limitations

## Strengths

- Political commitment and financial contribution – NMMC (with BBIL donation)
- Use within an existing immunization program
- Government buy-in and approvals
- Partnerships and collaborations – national and global
  - National Polio Surveillance program (country office and field)
  - Local hospitals and laboratories

## Challenges

- Delays: NMMC administration changes, administrative and financial approvals for program implementation and evaluation components
- Coverage survey data collection by an external survey agency – required close supervision and monitoring of field work

# Navi Mumbai TCV Team!

- **Navi Mumbai Municipal Corporation leadership and staff**
- Government of India Ministry of Health and Family Welfare – Expanded Program on Immunization
- State of Maharashtra, Department of Public Health and Family Welfare
- Indian Academy of Pediatrics - Navi Mumbai Chapter
- Bharat Biotech International Limited
- WHO-India National Polio Surveillance Program (NPSP)
- Indian Council of Medical Research (ICMR) - NICED
- Stanford University
- Hospital and laboratory sites: Navi Mumbai Municipal Corporation hospital, Mathadi Trust Hospital, DY Patil Medical College and Hospital, MGM Vashi Hospital, Yewale Hospital, Joshi microbiology laboratory)
- WHO-SEARO and WHO-HQ
- International Vaccine Institute
- Grant Government Medical College
- Scientific Advisory Panel
- Bill and Melinda Gates Foundation
- CDC-Atlanta staff



# Thank you!



The findings and conclusions in this presentation are those of the author and do not necessarily represent the views of the Centers for Disease Control and Prevention

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