Improving Coverage of Newborn Vaccinations in India

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Immunization Program in India

- Annual infant beneficiaries ~ 26 million
- 61% children fully immunized *
- 7% children received no vaccination *
- Wide sub-national variation in coverage
- National policy for administering three vaccines within 24 hours of birth #
- No evaluated data available on newborn vaccination

* Source: Coverage Evaluation Survey, 2009
# BCG and birth doses of OPV and Hep B

State wise proportion of fully immunized in India (CES, 2009)
Why Newborn Vaccination is Important

- Achieve public health impact: Recommended in WHO position papers for early administration of three vaccines: BCG, Oral Polio Vaccine (OPV) and hepatitis B (HepB)
- **Strengthen the health system:** provides opportunity for
  - Early registration of newborn (linkage with health system)
  - Follow up for full immunization and other services
- **Capitalize on system improvements:** More newborns can be reached for vaccination due to increase in institutional deliveries as a result of Maternity Benefit Scheme (JSY) *
  - Institutional deliveries increased from 47% (DLHS 3, 2007-08) to 73% (SRS, 2012) #

* Janani Suraksha Yojana (JSY) in India to incentivize institutional deliveries
# DLHS: District Level Household Survey       SRS: Sample Registration System
Support from MCHIP for Newborn Vaccination

- MCHIP* provided immunization technical support to states of Jharkhand and Uttar Pradesh
  - Five poor performing districts
  - 46 district & sub-district level facilities
  - Population ~ 9 million
  - Annual birth cohort: ~ 0.2 million
- One consultant placed per district to support program managers and facility staff

* MCHIP: USAID supported Maternal and Child Health Integrated Program (India, 2009-2013)
Strengthening Newborn Vaccination

• Initial assessment through observation and discussions was done by consultants in all 46 facilities to understand ongoing practices (Jan-Jun 2011)

• Records revealed that only one-third of newborns receive BCG and OPV vaccination before discharge from facility

• Intervention to improve newborn vaccination was rolled out in phased manner between July 2011 – June 2013
Gaps Identified in Newborn Vaccination

- Lack of awareness among nursing staff about importance of early vaccination
- Recording and reporting formats not revised to capture vaccination given to newborns after delivery
- Vaccination provided at facilities only on specified days (2 days/week)
- No mechanism to supply vaccines and other logistics to delivery room and postpartum ward
- Concern for vaccine wastage – no open vial policy *
- Irregular monitoring and review at facility or district level

* Policy launched in India in 2011 that allows opened vials of OPV and HepB to be used in consecutive immunization sessions.
Interventions (1)

- Sensitization of program managers, health facility staff and other stakeholders
- On job orientation of nursing staff recording in MCH cards and delivery registers
- Daily supply of vaccines (and other logistics) to postpartum ward in proper cold chain
Interventions (2)

Revised recording registers and reporting formats to capture newborn vaccinations

Developed job aids for display in health facilities and postpartum wards

Review of records, reports and practices during meetings and supervisory visits

Photo: MCHIP/Jharkhand
Trends in Newborn Vaccination Coverage in 46 Facilities

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<tbody>
<tr>
<td>BCG</td>
<td>35%</td>
<td>60%</td>
<td>66%</td>
<td>73%</td>
<td>72%</td>
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<tr>
<td>OPV (zero dose)</td>
<td>38%</td>
<td>58%</td>
<td>69%</td>
<td>76%</td>
<td>80%</td>
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<tr>
<td>Hep B (birth dose)</td>
<td>7%</td>
<td>64%</td>
<td>75%</td>
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Interventions introduced (July 2011)

Initial Assessment

HepB birth dose launched (Dec’ 11)
Result of Interventions

• Proportion of newborns vaccinated with BCG and Zero dose OPV doubled by the end of intervention

• Hep B birth dose vaccination increased to same level as Zero dose OPV after its launch in Dec’ 2011

• Additional 60,000 newborns vaccinated because of these interventions in 46 facilities (between July 2011 and June 2013)

• Constraints: Coverage limited to 70-80% due to:
  ▪ Unavailability of one or more vaccines
  ▪ Early discharge of mother (in case of deliveries conducted at night)
  ▪ Resistance from mothers and caregivers
Good Practices in Carrying Out Interventions

Staff nurse preparing syringe in postpartum ward to vaccinate newborn

MCH card filled and provided to newborn before discharge from facility

Photo: MCHIP/Jharkhand
Scaling Up

- Newborn vaccination scaled up state-wide in Jharkhand and Uttar Pradesh
  - Annual birth cohort ~ 5 million
  - No additional financial or human resources were required for scale-up
- Intervention briefs (guidance note, synopsis and success story) shared with government, partners, stakeholders for adaptation in other states
- Published in International Journal of Medical Research and Review *

[Link: http://www.jsi.com/JSIInternet/Resources/publication/display.cfm?txtGeoArea=INTL&id=15755&thisSection=Resources]
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