Meeting of the Strategic Advisory Group of Experts on Immunization (SAGE)

Engagement of private providers with the National Immunization Programme: Opportunities and Challenges

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Vice President - Academics, Public Health Foundation of India, New Delhi
Director – Indian Institute of Public Health, Delhi
Outline of the Presentation

• Private sector in India
• Trends in full immunization
• Private providers’ contribution to vaccine coverage
• Evidence of private sector service delivery
• Private providers’ role in adverse events following immunization (AEFI) and vaccine-preventable disease surveillance
• Harmonization of vaccine schedule and related issues
• Innovation in public private partnership
• Engagement with organizations and other key influencers
• Major challenges and strengths
Private Sector in India

• Private sector in health strongly influenced by, and influences, the public sector

• A useful typology in mixed systems. 3 metrics:
  • private share in total health expenditure;
  • private share in primary and secondary care episodes; and
  • extent of reliance of public sector on private fee payment

• Example- Children aged 0-2 years seeking treatment for ARI (63%) and diarrhea (48%) at private provider (CES, UNICEF, 2009)

Trends in Full Immunization

**Trends in Full Immunization**
Percentage of children 12-23 months

<table>
<thead>
<tr>
<th></th>
<th>NFHS-3 (2005-06)</th>
<th>NFHS-4 (2015-16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>58</td>
<td>64</td>
</tr>
<tr>
<td>Rural</td>
<td>39</td>
<td>61</td>
</tr>
<tr>
<td>Total</td>
<td>44</td>
<td>62</td>
</tr>
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</table>

Children aged 12-23 months who received most of the vaccinations in private health facility (%)
- NFHS 3 (2005-06): 10.5%
- NFHS 4 (2015-16): Overall - 7%
  - Rural: 3%, Urban: 17%

**Full Immunization**
Percentage of children 12-23 months

- **ECONOMIC CLASS**
  - No education: 60%, 67%
  - Primary complete: 52%, 60%
  - Secondary or more complete: 67%
  - CASTE/tribe: Scheduled caste: 63%, Scheduled tribe: 62%, Other backward class: 64%
  - None of them: 46%

- **WEALTH QUINTILE**
  - Lowest: 63%, Second: 61%, Middle: 64%, Fourth: 67%, Highest: 70%
Role of the private sector in vaccination delivery in India: evidence from private vaccine sales data, 2009–12
Abhishek Sharma,1,2,3,* Warren A Kaplan,1,2 Maulik Choksi Sanjay P Zodpey

Estimates on State-Specific Pneumococcal Conjugate Vaccines (PCV) Coverage in the Private Sector: Evidence from PCV Utilization
Habib Hasan Farooqui1, Sanjay Zodpey1, Maulik Chokshi2
1Assistant Professor, 2Director, 3Associate Professor, Indian Institute of Public Health Delhi, Gurgaon, Haryana, India

Pediatricians’ Perspectives on Pneumococcal Conjugate Vaccines: An Exploratory Study in the Private Sector
Sanjay Zodpey1, Habib Hasan Farooqui1, Maulik Chokshi2, Balu Ravi Kumer4, Naveen Thacker5
1Pediatric Health-Delhi, Gurgaon, Haryana, 2Past President, Indian Academy of Pediatrics (IAP), 3Inc

How do parents and pediatricians arrive at the decision to immunize their children in the private sector? Insights from a qualitative study on rotavirus vaccination across select Indian cities
Mathew Sunil George1, Preeti Negandhi2, Habib Hassan Farooqui2, Anjali Sharma3, and Sanjay Zodpey
1Sociology and Behavioural Sciences, Indian Institute of Public Health Delhi, Gurgaon, Haryana, India; 2Indian Institute of Public Health Delhi, Gurgaon, Haryana, India
Private providers’ contribution to vaccine coverage (2009-2012)

<table>
<thead>
<tr>
<th>States</th>
<th>BCG Overall coverage rate (%)</th>
<th>BCG Private-sector vaccine share (%)&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Measles Overall coverage rate (%)</th>
<th>Measles Private-sector vaccine share (%)&lt;sup&gt;a&lt;/sup&gt;</th>
<th>DPT3 Overall coverage rate (%)</th>
<th>DPT3 Private-sector vaccine share (%)&lt;sup&gt;a&lt;/sup&gt;</th>
<th>OPV3 Overall coverage rate (%)</th>
<th>OPV3 Private-sector vaccine share (%)&lt;sup&gt;a&lt;/sup&gt;</th>
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<tbody>
<tr>
<td>North</td>
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<td></td>
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<tr>
<td>Punjab + Haryana</td>
<td>88.3</td>
<td>17.1</td>
<td>80.2</td>
<td>10.5</td>
<td>77.8</td>
<td>6.1</td>
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<td>12.7</td>
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<td>50.2</td>
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<td>West Bengal</td>
<td>89.8</td>
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<td>76.0</td>
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<tr>
<td>West</td>
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<td>Andhra Pradesh</td>
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<td>79.9</td>
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<td>2.1</td>
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<td>5.7</td>
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<td>6.5</td>
<td>86.2</td>
<td>82.0&lt;sup&gt;b&lt;/sup&gt;</td>
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<tr>
<td>Tamil Nadu</td>
<td>94.2</td>
<td>2.6</td>
<td>90.5</td>
<td>2.5</td>
<td>87.2</td>
<td>1.2</td>
<td>83.7</td>
<td>1.6</td>
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<tr>
<td>Northeast</td>
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<td>Assam</td>
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<td>56.2</td>
<td>1.1</td>
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<tr>
<td>Weighted means&lt;sup&gt;c&lt;/sup&gt;</td>
<td>83.5</td>
<td>4.7</td>
<td>64.3</td>
<td>3.5</td>
<td>61.5</td>
<td>2.3</td>
<td>72.9</td>
<td>7.6</td>
</tr>
</tbody>
</table>

Sharma et al 2016, HPP
Private providers’ contribution to vaccine coverage – estimates from sales data (2012)

Private providers’ contribution to vaccine coverage – estimates from sales data (2012)

% Birth cohort that received vaccine in private sector

<table>
<thead>
<tr>
<th>State</th>
<th>BCG</th>
<th>DPT3</th>
<th>Measles</th>
<th>Hepatitis B</th>
<th>HiB</th>
<th>Rotavirus</th>
<th>PCV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>West Bengal</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>1</td>
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<td>1</td>
<td>0</td>
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<tr>
<td>Punjab/Haryana</td>
<td>2</td>
<td>5</td>
<td>11</td>
<td>5</td>
<td>5</td>
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<td>Maharashtra</td>
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<td>Madhya Pradesh</td>
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<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Karnataka</td>
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<td>2</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
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<tr>
<td>Bihar</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Andhra Pradesh</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Private sector service delivery

• National survey of pediatricians - selective or routine administration of vaccines
  • PCV (86%), Hib (96%), and Rotavirus (80%)
• High perceived disease susceptibility and vaccine efficacy were associated with routine administration of Hib vaccine but not for PCV or rotavirus vaccine.

  *(Gargano et al. Vaccine 2012)*

• The decision to recommend a vaccine is taken on the principle that it is better to be safe than sorry than on any objective assessment of whether a child requires a particular vaccine or not.

  *(George MS et al. Human Vaccines & Immunotherapeutics (2016)*

• Private sector’s contribution is commendable but there are quality issues.
  • For example - 51% of practitioners vaccinate even in absence of immunization card, 44% would vary the Immunization Schedule for financial reasons sometimes or often, 69% do not report vaccination coverage to Government

  *(Hagan et al, 2017 submitted)*
Role of private providers in AEFI and VPD surveillance

• Less than 5% of all AEFIs reported to AEFI surveillance system are from private sector (over past 6 years)

• Details of the members of the Indian Academy of Pediatrics (IAP) for each state and district have been shared with District Immunization Officers to facilitate reporting AEFIs

• IAP has a VPD reporting software (IDSURV) for private practitioners, which has the provision to report serious/severe AEFIs

Courtesy - ITSU
Key difference between UIP and IAP

Vaccination schedules

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**Revised National Immunization Schedule**

<table>
<thead>
<tr>
<th>Age</th>
<th>Vaccines given</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birth</td>
<td>BCG, OPV-0, Hepatitis B Birth dose</td>
</tr>
<tr>
<td>6 Weeks</td>
<td>OPV-1, Pentavalent-1, fIPV-1, <strong>Rota-1</strong> &amp; <strong>PCV-1</strong></td>
</tr>
<tr>
<td>10 weeks</td>
<td>OPV-2, Pentavalent-2 &amp; <strong>Rota-2</strong></td>
</tr>
<tr>
<td>14 weeks</td>
<td>OPV-3, Pentavalent-3+ fIPV-2/IPV, <strong>Rota-3</strong> &amp; <strong>PCV-2</strong></td>
</tr>
<tr>
<td>9-12 months</td>
<td>Measles (MCV1), JE1**, PCV-B or MR-1</td>
</tr>
<tr>
<td>16-24 months</td>
<td>Measles (MCV2), JE2**, DPT-B, OPV-B or MR-2</td>
</tr>
<tr>
<td>5-6 years</td>
<td>DPT-B2</td>
</tr>
<tr>
<td>10 years</td>
<td>TT</td>
</tr>
<tr>
<td>16 years</td>
<td>TT</td>
</tr>
<tr>
<td>Pregnant</td>
<td>TT1, 2 or TT Booster***</td>
</tr>
<tr>
<td>Mother</td>
<td></td>
</tr>
</tbody>
</table>

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**Legend:**
- Planned to be introduced
- Being introduced/scaled up

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**Key differences between UIP and IAP:**

- UIP: Recommended Immunization Schedule
- IAP: Indian Academy of Pediatrics

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Vaccination schedule harmonization issues

- IAP’s immunization is generally harmonized with UIP schedule.
- Large number of antigens recommended in IAP schedule.
- Age groups considered for proposed antigens are broader than UIP schedule.
- Given that some of the newer antigens are not available through UIP, affordability concerns results in incomplete immunization.

For example:
- Gujarat private sector reported - vaccine schedules not followed by 45% of providers if concerns about ability to pay (Hagan et al, 2017 submitted)
- PCV private sector study reported – 68% provider recommended PCV to all whereas 32% recommended only to those who could afford it
- 97% providers reported - high PCV price is main reason for refusal of vaccination. (Zodpey S, et al. Indian J Public Health 2015)
Immunization Technical Support Unit of MoHFW is an innovative public private partnership providing techno-managerial support to UIP in program design and management, policy research, advocacy and communications.
Engagement with organizations & other key influencers

• IAP and IMA representatives are liaison members of the NTAGI.

• IAP and IMA representatives are members of the state and district AEFI committees.

• In domain of capacity building,
  • IAP representative is included in ToT for new vaccine introduction.
  • ADVAC and EVAC courses run by the private sector (Child Health Foundation) has vaccine manufacturers and government personnel as trainers.

• In area of vaccine Logistics and cold chain,
  • Private players, Godrej and Aukma are involved in training of the cold chain handlers for the new cold chain technology pilot that ITSU is doing in partnership with PATH
  • KPMG, a private consultancy recommended IT for improved supply chain and stock management which led to the pilot and subsequent scale up of eVIN.
  • A private player- Logistimo provided the technology solution for the eVIN data loggers.
Engagement with organizations & other key influencers

- Professional organizations (e.g., India Academy of Pediatrics)
  - Positive
    - Biggest network of pediatricians, reputed and influential
    - Presence across the entire length and breadth of the country
    - Members of the organization command respect from community and are key opinion leaders
    - Can provide platform for engagement with community and practitioners
  - Negative
    - Conflict of interest is hard to eliminate
    - May find difficulty in addressing equity issues

- Vaccine manufacturers
  - Positive
    - Provides commodity security
    - Healthy competition can make vaccines more affordable
    - Manages risk of product development
  - Negative
    - Cannot address equity and affordability concerns
    - May have conflict of interest
Major challenges and strengths with engagement in private sector

• Challenges
  • Lack of sustainable platform to bring all stakeholder together to discuss and debate on roles and responsibilities, purpose and principles of engagement
  • Absence of framework to explicitly capture incentives, expectations and responsibilities

• Strengths
  • Presence across the country
  • Significant proportion of community seek care from them
  • Compliments public health system in big way especially on treatment side
  • Significant health workforce and health infrastructure
Thanks