Determinants of Vaccine Uptake in Low Resource Settings

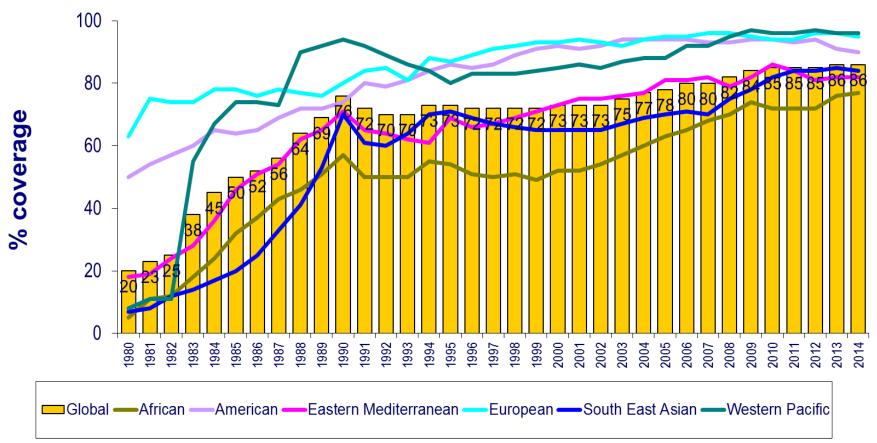


Anne LaFond John Snow, Inc. (JSI)

Les Pensières Fondation Mérieux Conference Center Veyrier du Lac – France September 29, 2015



Global immunization coverage 1980-2014, DTP3 2014

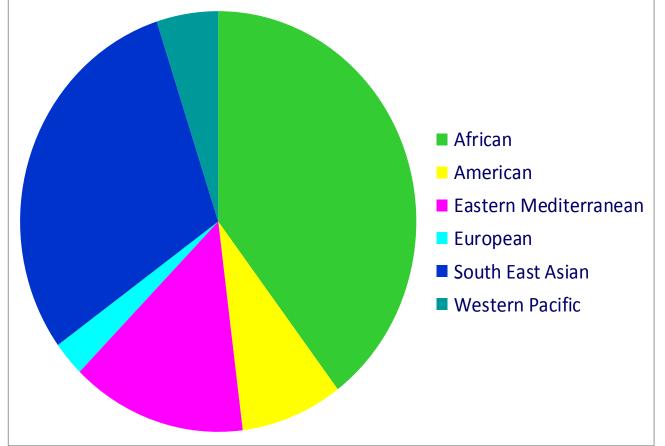


Source: WHO/UNICEF coverage estimates 2014 revision. July 2015 Immunization Vaccines and Biologicals, (IVB), World Health Organization. 194 WHO Member States. Date of slide: 21 July 2015.





18.7 million infants not immunized (DTP3), 2014



Source: WHO/UNICEF coverage estimates 2014 revision. July 2015 / United Nations, Population Division. The World Population Prospects - the 2012 revision". New York, 2013. Immunization Vaccines and Biologicals, (IVB), World Health Organization.

194 WHO Member States. Date of slide: 23 July 2015.





World Health Organization Number of unvaccinated children, selected African countries

• Ethiopia 0.8 million

- DR Congo 0.7 million
- Nigeria 2.8 million
- Indonesia 0.7 million
- India 6.9 million
- Pakistan 1.2 million



Historical focus



- Supply side readiness dominated
- Demand generation
- Low uptake, low coverage, high drop out? Blame the mother.....

Beyond Vaccine Hesitancy and Confidence

- Recognition that high vaccine hesitancy results in low vaccine demand
- BUT hesitancy in terms of low trust in or fear of vaccines is not widespread in low resource countries
- What is influencing uptake?



New Framing



- There are demand-side factors and actors that play role in overall system dynamics and shape key immunization program outcomes such as coverage, completion of immunization schedule (reduce drop outs), equitable access to and uptake of vaccines.
- Related to service delivery and user experience
- Synergy between supply and demand

Supply Demand Distinction

Favin, et. al, 2012, Rainey, et. al. 2011

Meta-review of literature indicates primary cause of <u>drop-out</u> attributable to:

• Service delivery

- Vaccine shortage &/or cold chain breakdown
- Long waits
- Outreach sessions infrequent
- Improper contraindication practices
- Missed opportunities
- Local and Interpersonal Communication
 - Not told to return
 - Not provided with information on vaccination schedule
 - Health staff perceived as "unfriendly" or hostile

Community linkages

- Community not informed of outreach dates
- Session times conflict with livelihood or family duties
- No active follow up of defaulters
- Limited engagement

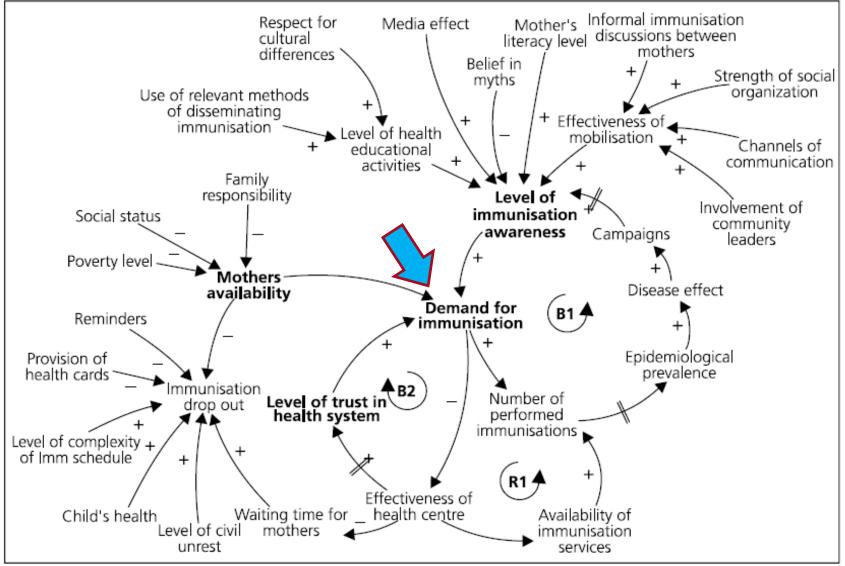
Focus on demand

Global advisory and technical groups working on refining the notion of demand for vaccination in low and middle income countries.

- GVAP SO2 WHO (Global Vaccine Action Plan)
- WHO TFI Task Force on Immunization in Africa
- Gavi Strategic Focus Area



Conceptual Framework: Causal Loop Diagram for Demand for Immunization



Rwashana A, Williams D, Neema S. Systems dynamics approach to immunization healthcare issues in developing countries: a case study of Uganda, Health informatics J 2009.

Un- / Under-immunized children

For non-immunized children

 Associated with difficult access, inconvenient hours, negative beliefs/misinformation, minority status, parental education, cultural mores, religious beliefs, poorest, least educated families, poor TT vaccination status of caregiver

For under-immunized children

 Associated with lack of understanding of need to return and when, poor treatment/bad experiences, missed opportunities, fears, immunisation system factors, access to services

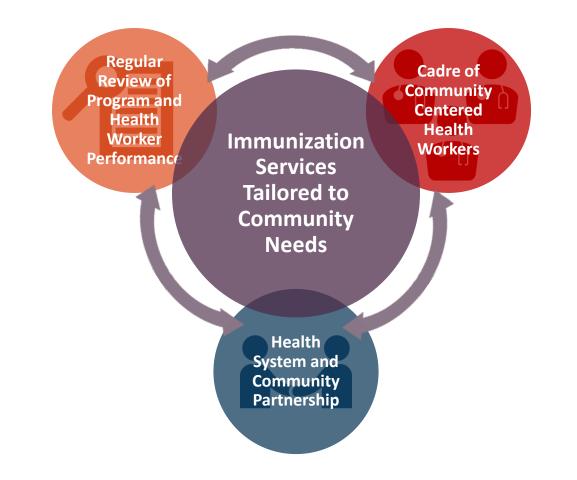
Programmatic implications include

Evidence

suggests

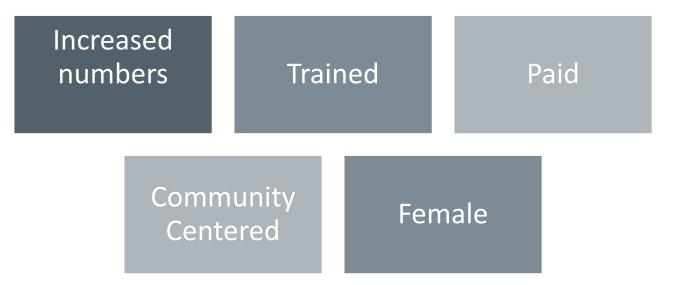
- Engage communities to build trust in immunisation, improve access to services, clarify practical information
- Improve quality and convenience of services; intensify outreach

Four RI Direct Performance Drivers

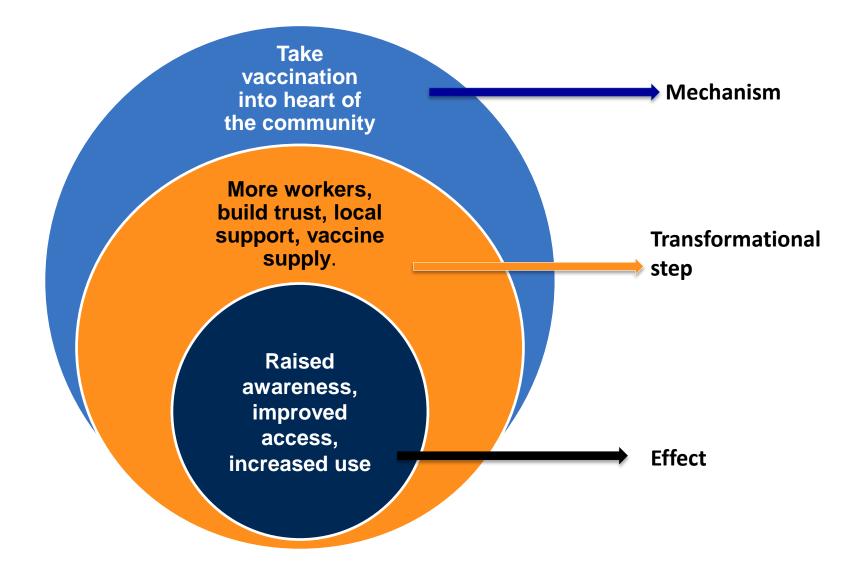


LaFond, et.al, 2014

Cadre of Community-centered Health Workers



Cadre of Community-centered Health Workers





"75% of Health Extension Workers' (HEW) time is spent on house-to house to do sensitization and deliver services. As a result of this effort the awareness of the community about the importance of immunization has improved. This motivates HEWs to become more dedicated to their work."

do and Treatment of Lepres.

Partnership Between the Health System and the Community

Health System

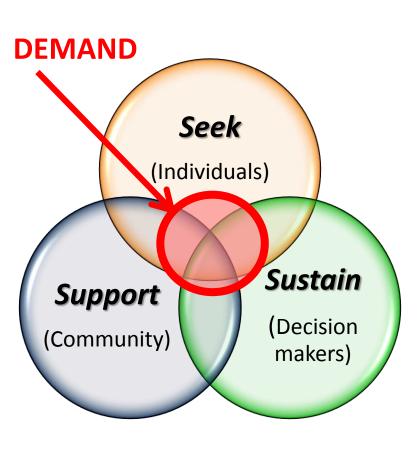
Community

Local Administration

Tailor Immunization Services to Community Needs

Standard program strategies are adapted to local context Health workers modify their behavior towards mothers and children District management teams have fiscal autonomy to help health workers tailor their services "Community Health Nurses are also very much in touch with the community. For instance the new outreach site being introduced was at the request of the community members and the Community Health Nurses are in the process of discussing with them the most convenient day for the Child Welfare Clinics in their community."

Driving and Sustaining Demand for Vaccination Services



- Service quality affects demand, so services must respond to individual and community views.
- Strong demand is vital to immunization success so needs to be captured in program strategies.
- Communities need mechanisms for providing input to service delivery decisions
- Much more to learn on what works
- Working definition: Demand is the actions of individuals and communities to seek, support, and/or advocate for vaccines and vaccination services.

GVAP, 2015

To do: improving uptake



- Better understand the pathways to improving uptake positive deviants
- Human centered techniques to create empathy and define user-led solutions
- Mixed methods research to understand the interplay of supply and demand
- Create and sustain enabling environments for clients/consumers
- Link clients, services, communities and local authorities to develop shared accountability and to advocate for reliable, good quality services
 - Cultivate resiliency in communities and local health systems to counter mistrust and threats to resources required to sustain and enhance immunization outcomes.

LaFond, et al, 2014; GVAP, 2015 Johri, et, al. 2015

References

- Barrera et al. From the parents' perspective: a user-satisfaction survey of immunization services in Guatemala, **BMC Public Health**, 2014, 14:231.
- Favin M, Stenglass R, Fields R, Banerjee K, and Sawhneye M, Why children are not vaccinated: a review of the grey literature, **International Health 4** (2012) 229–238.
- Johri,M, Cielo Pérez M, Arsenault C, Sharma JK, Pant Pai N, Pahwaf S, and Sylvestre MP, Strategies to increase the demand for childhood vaccination in low- and middle-income countries: a systematic review and meta-analysis, **Bull World Health Organ** 2015;93:339–346C.
- LaFond A, Kanagat N, Steinglass R, Fields R, Sequeira J, and Mookherji S. 2014. Drivers of routine immunization coverage improvement in Africa: findings from district-level case studies. **Health Policy and Planning**, March 10, 2014, pp1-11.
- Mookherji S, LaFond A. 2013. Strategies to maximize the generalization from multiple case studies: Lessons from the Africa Routine Immunization System Essential (ARISE) project. **Journal of Evaluation.** 19(3): 284-303.
- Rainey, J, Watkinsa W, Tove K. Rymana, Paramjit Sandhua, Anne Boa, Kaushik Banerjeeb, Reasons related to non-vaccination and under-vaccination of children in low and middle income countries: Findings from a systematic review of the published literature, 1999–2009, Vaccine, 29 2011, 8215-8221.
- Rwashana A, Williams D, Neema S. Systems dynamics approach to immunization healthcare issues in developing countries: a case study of Uganda, Health informatics J 2009.
- WHO/UNICEF coverage estimates. 2013, 20143 / United Nations, Population Division. The orld Population Prospects - the 2012 revision. New York, 2013. Immunization Vaccines and Biologicals, (IVB), World Health Organization.

For more information about JSI's research, monitoring, evaluation & health information work, contact chime@jsi.com

