Polio Eradication

Progress & Prospects

30 Oct 2008
Stakeholder Consultation, 28 Feb 2007

Launch of 'Intensified Eradication Effort'

The Director-General of WHO has announced a 24-month review to guide 'next steps'
Special Importance of India & Nigeria

>100 international polio exportations, 2003-2007
Key Landmarks for 2007-8

India: stop Type 1 polio

Nigeria: reduce missed children to <15%
Type 1 Polio Cases – last 6 months  
(22 Apr – 21 Oct 2008)
Type 3 Polio Cases – last 6 months
(22 Apr - 21 Oct 2008)
What's the problem in infected areas?

Vaccination status of children, 2003 to 2008

**INDIA**

- West UP
- Bihar
- Rest of country

'Poor OPV efficacy'

**NIGERIA**

- High risk
- Medium risk
- Rest of country

Poor OPV Delivery

*non-polio AFP cases as of 07 Oct 2008*
Improving Population Immunity
Impact of monovalent OPV1 vs tOPV

% children protected per dose

north India  | Pakistan*  | Nigeria
---|---|---
10% | 21% | 16%
31% | 43% | 60%

* difference not statistically significant due to low cases.
Overall gains: type 1 immunity 2005 to 2007
(combining vaccine efficacy & coverage)

India  
Pakistan  
Nigeria

* direct protection against type 1 polio in children <5 years
Addressing 'poor OPV Efficacy'
New tools & tactics interrupted type 1 polio in UP, India, the most entrenched reservoir in the world.

Uttar Pradesh: Last indigenous type 1 polio, Nov 2007

but progress is fragile!
'I am making polio eradication WHO’s top operational priority.

The remaining problems are not technical. They are operational. They can be solved, when we have the resolve.'

Dr. Margaret Chan
WHO Director-General
17 June 2008
What are the remaining 'operational' challenges?

Active conflict

Insecurity & autonomous provinces

Political & societal buy-in

Huge financial & logistic challenges

In the last endemic countries, the 'missed' children lie beyond the reach of Health Ministries.
Addressing poor OPV delivery: Head of State Leadership

Prime Minister India

President Nigeria

UN Secretary-General
World Health Assembly
Polio Resolution, 24 May 2008

2) Urges Nigeria to reduce the risk of international spread of poliovirus by quickly stopping the outbreak.

3) Urges India, Pakistan, and Afghanistan to implement large-scale mop-ups.

A new international resolve to finish eradication.
Saudi Arabia is further enhancing OPV immunization requirements to protect Pilgrims to Mecca.
Pakistan
19 August 2008

"We all have to play our full role to turn the dream of a polio-free Pakistan into reality."

Syed Yousuf Raza Gilani
Prime Minister, Pakistan
Addressing 'poor OPV delivery': new tactics in Pakistan

Use of finger-marking to hold districts accountable

Task force constituted for polio eradication
By our correspondent
Karachi

A district task force has been formed under the chairmanship of DCO Karachi Javed Hanif Khan for the complete eradication of polio in Karachi.

A meeting was held in this regard on Wednesday, where it was decided that legal action would be taken against all organisations and schools who create hurdles in the ongoing anti-polio campaign. The
Addressing 'suboptimal OPV delivery': heightened resolve in Afghanistan

'Drs. Kakar & Taheri, veterans of the fight against polio, died with their driver in the attack at Kandahar'

Ambitious Afghan polio effort proceeds despite slayings

National Post (Canada), 19 Sept 08
Addressing 'suboptimal OPV delivery': Impact in Afghanistan

Polio Cases 2008

Population Density

April

Sept

data at 21 Oct 08
"We will do everything humanly possible to ensure that polio is finally and totally eradicated from Nigeria."

Umaru Yar'Adua
President of Nigeria
Addressing poor OPV delivery: Nigeria

Direct impact of Governor oversight on OPV campaigns in key northern states

OPV status of children, 2008

Polio cases, 2008

- Kebbi & Gombe high burden states
- 3+ dose
- 1-2 dose
- 0 dose
The Gravity of the Immunity Gap in Nigeria:

type 2 circulating Vaccine-derived Poliovirus (cVDPV)

Most recent 6 months map
6 Apr – 7 Oct 2008

Monthly distribution of VDPV2 cases

Data in WHO HQ as of 7 Oct 2008
Immediate Priorities
Optimize response to type 1 importation in west UP, India

Impact of original SIA plan on type 1 immunity, west UP

Impact of intensified mOPV1 SIA plan, west UP

Sep: mOPV1
Nov: mOPV3
Jan: tOPV
Feb: tOPV

Sep: mOPV1
Oct: mOPV1
Nov: mOPV1
Dec: mOPV1
Jan: tOPV
Feb: tOPV
Immediate Priorities (cont'd)

India (cont'd)

- Gol 'war plan' to rebuild immunity in Bihar (post-floods).
- sustain aggressive mop-up plan in polio-free areas

Nigeria

- advocate with H.E. President to engage key Governors.
- full use of major Nigeria institutions (trad'l leaders, military)
- back to basics: vaccinator selection, training, supervision.
Immediate Priorities (cont'd)

**Pakistan**

- Adapt SIA strategy to new population movements & security: 6 NIDs/yr (tOPV +/- mOPV).
- Aggressive mOPV mop-ups in re-infected areas.
- Support new GoP initiative on full accountability of district leaders for campaign quality.

**Afghanistan**

- Increase technical support in key reservoir areas.
- Continue dialogue with Taliban (Shura directives).
- Optimize use of new 'Peace Days' (21 Sept).
Further innovations
2008-2009
Further Innovations, 2009

**Serosurveys** (esp. Pakistan)
- to better understand OPV efficacy & programme efficacy.

**Environmental sampling** (esp. Pakistan)
- to complement AFP surv. & better target reservoirs.

**Immunization Requirements**
- to determine if OPV travel req'ts could reduce int'l spread.

**Bivalent OPV (target Q2-3 2009)**
- to complement mOPV in areas with types 1 & 3 polio.
Refining the role of bivalent OPV depends on results from ongoing trial results

*(field work will be completed by end-2008)*

If bOPV seroconversion compares well to mOPV1 & mOPV3, there could be substantial demand, esp. for areas of 'failure to vaccinate'.
IPV: more 'insurance' to close immunity gap in west UP, India?

Children seronegative for type 1 polio, by age, Moradabad 2008

*IPV dose may seroconvert up to 80% susceptible children.*

In west UP up to:
- 10% immunity gain in 6-12 mos.
- but, ~2% immunity gain overall.

**Challenges:**
- *to keep mOPV1 >90%*
- *to keep all mOPV1 rds*
Summary
Key Landmarks at Oct 2008

India: stop Type 1 polio on track

Nigeria: <15% missed children delayed in key states (e.g. Kano)
There is no question that the eradication strategies work when fully applied...

...finishing eradication depends fully on mobilizing the political will to reach all children.
The Director-General is convening an independent review of the progress & remaining barriers to reach all children with OPV.

The findings will guide eradication efforts in 2009-2010.