New Vaccine Introduction

'Polio Vaccine switch (tOPV to bOPV), IPV and MR vaccine introduction in Kenya'

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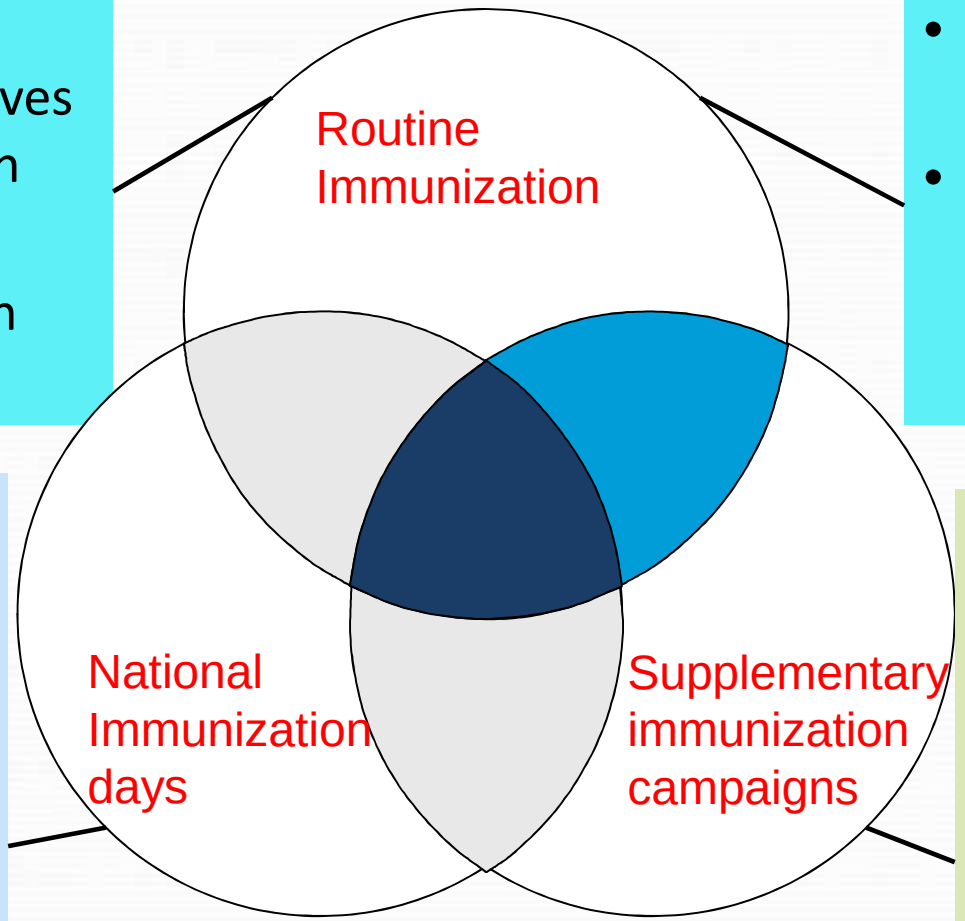
Evolution of the Immunization program

- Established in 1980 with the main aim of providing immunization against six killer diseases of childhood, before then, provided on an ad-hoc basis through schools and the larger health facilities
- Therefore concentrated initially on **establishing and strengthening the health service delivery**
- Later, targeted **Universal Child Immunization goals** of immunizing at least 80% of the target population
- Program focus has since shifted to **Disease Elimination and Eradication**, with the Goals of*: Polio* ***Eradication*** *and Measles, Rubella and Maternal Neonatal Tetanus* ***Elimination***
- Shift with to **universal access to immunization** with SDGs and Universal Health Coverage as guiding principles

Vaccination strategies

- Routine immunization serves 80% of population
- Venues: Clinics, schools, out reach facilities

- Not a time limited strategy
- Clients present to receive immunization services



- Done in collaboration with other activities
- Time limited approach
- Expensive service strategy
- Useful to reach both hard to reach populations

- Offer rapid scale up of immunization services.
- Time limited interventions
- Very expensive strategy
- Important for disease control
- Service is taken to clients

…….So,…Why Immunize?

Immunization & Disease

- Once your immune system is trained to resist a disease, you are said to be immune to it
- Before vaccines, the only way to become immune to a disease was to actually get it and…….with luck, survive it
- You may be contagious and pass the disease to family members, friends, or others who come into contact with you
- Diseases have been able to circumvent drugs through development of resistance but this is yet to be reported for vaccination
- Vaccine Efficacy in individuals and population effectiveness differ- basis for prevention programs


BACK
BENCHERS
THEBACKBENCHERS

Polio: A Paralyzing Disease for Life

Delhi, 2002

Freetown, Sierra Leone, 2001

……IPV Introduction

&

tOPV to bOPV Switch

We are close to the eradication of polio

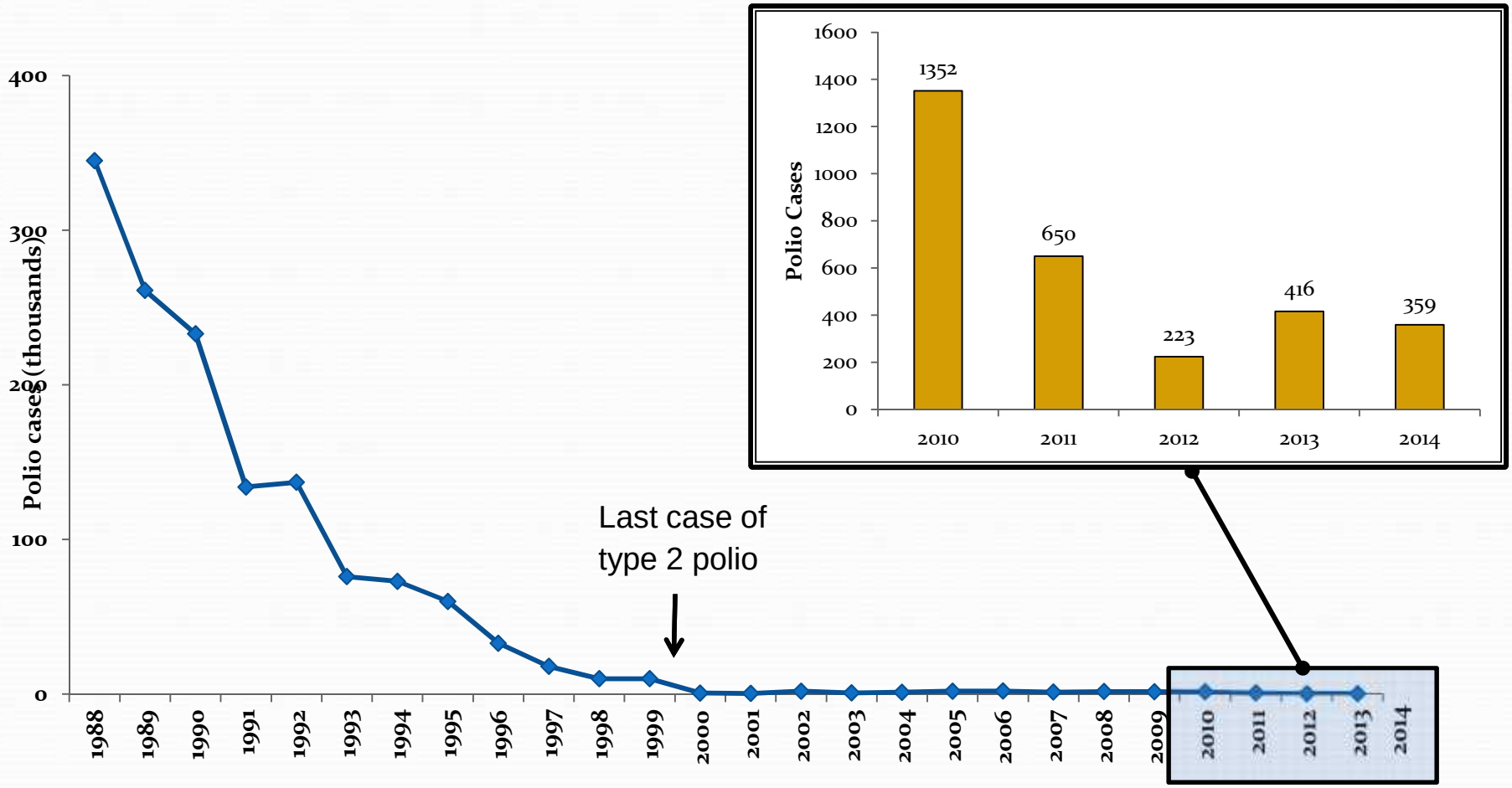
- Immunization efforts have reduced the number of polio cases globally by more than 99% over the last two decades

- The transition from trivalent OPV (tOPV) bivalent OPV (bOPV) is part of the polio endgame strategy

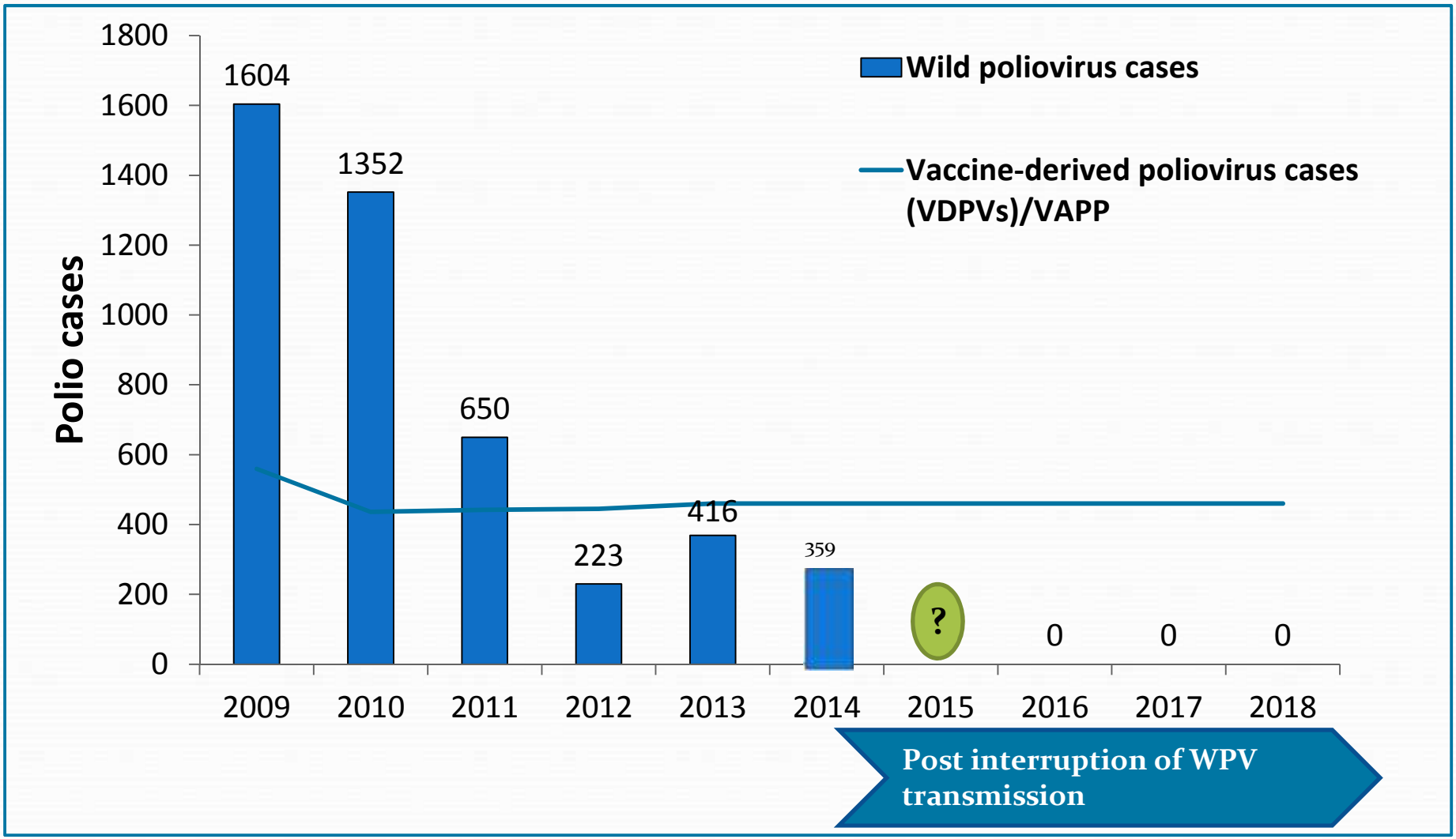
- *There are three types of polio viruses: 1, 2, and 3. The last type 2 wild poliovirus was detected in 1999*

Together, we can finish the job of eradicating polio

Polio Eradication: Significant decline in number of persons paralyzed by wild polioviruses, 1988-2014*



As wild polioviruses are eradicated, number of circulating vaccine-derived (cVDPV) cases exceeds wild poliovirus cases



Estimated VDPV cases compared to reported cases of wild poliovirus (as of 31 December, 2014)

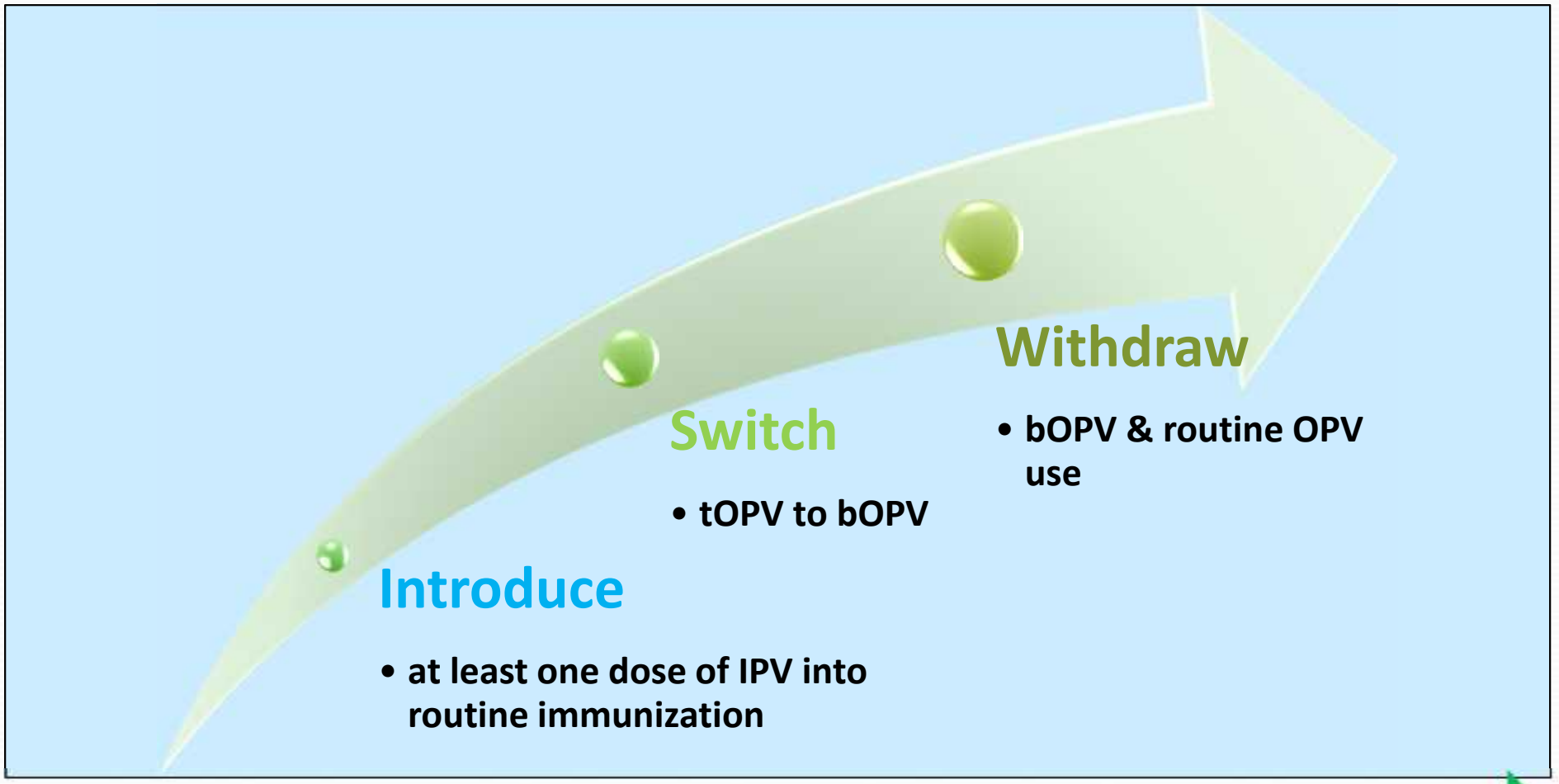
Polio Eradication and Endgame Strategic Plan

In 2013, the **Polio Eradication and Endgame Strategic Plan 2013-2018** was endorsed by the World Health Assembly.

This global plan recommends the:

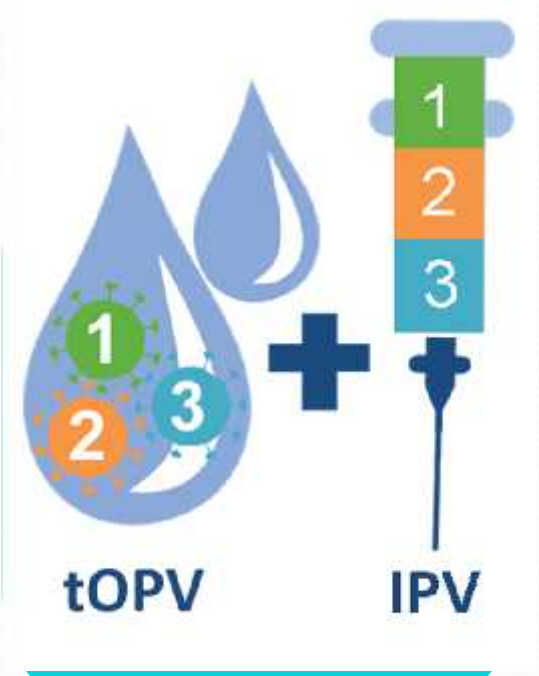
- Withdrawal of all OPV worldwide, beginning with the type 2 component in April 2016 (“the switch” from tOPV to bOPV)
- Introduction of IPV into routine immunization before the switch from tOPV to bOPV to maintain protection against all 3 types of poliovirus

The Plan addresses the Endgame through three distinct stages



Ongoing STRENGTHENING of routine immunization services

The switch from tOPV to bOPV



In April 2016, withdraw type 2

- tOPV and IPV protect against poliovirus types 1, 2 and 3.
- The type 2 component of tOPV causes the majority of cVDPV cases.

- bOPV and IPV protect against poliovirus types 1, 2 and 3.
- bOPV has a lower risk of cVDPVs.

Both OPV and IPV are needed at this stage of polio eradication

After April 2016

- IPV will provide protection against polio type 2 after the type 2 component of OPV is removed.
- IPV also provides additional protection against types 1 and 3.
- IPV is not a 'live' vaccine, therefore carries no risk of VAPP or cVDPV

Used together, OPV and IPV provide the best form of protection in the final stages of polio eradication.

The switch is occuring simultaneously in all countries during 2 weeks in April 2016

- **All 156 OPV countries must switch from tOPV to bOPV in routine immunization and SIAs**
  - Manufacturers will not supply tOPV for use after the switch
- **WHY April 2016?**
  - To coincide with the “low” season for poliovirus transmission in countries with endemic polio or recent polio cases
- **WHY globally synchronize during 2 weeks?**
  - To ensure that no country is put at risk of importing a cVDPV2 from another country
  - Regions with continued tOPV use after the switch may generate type 2 cVDPVs, which could spread elsewhere

.....Measles Rubella Vaccine Introduction

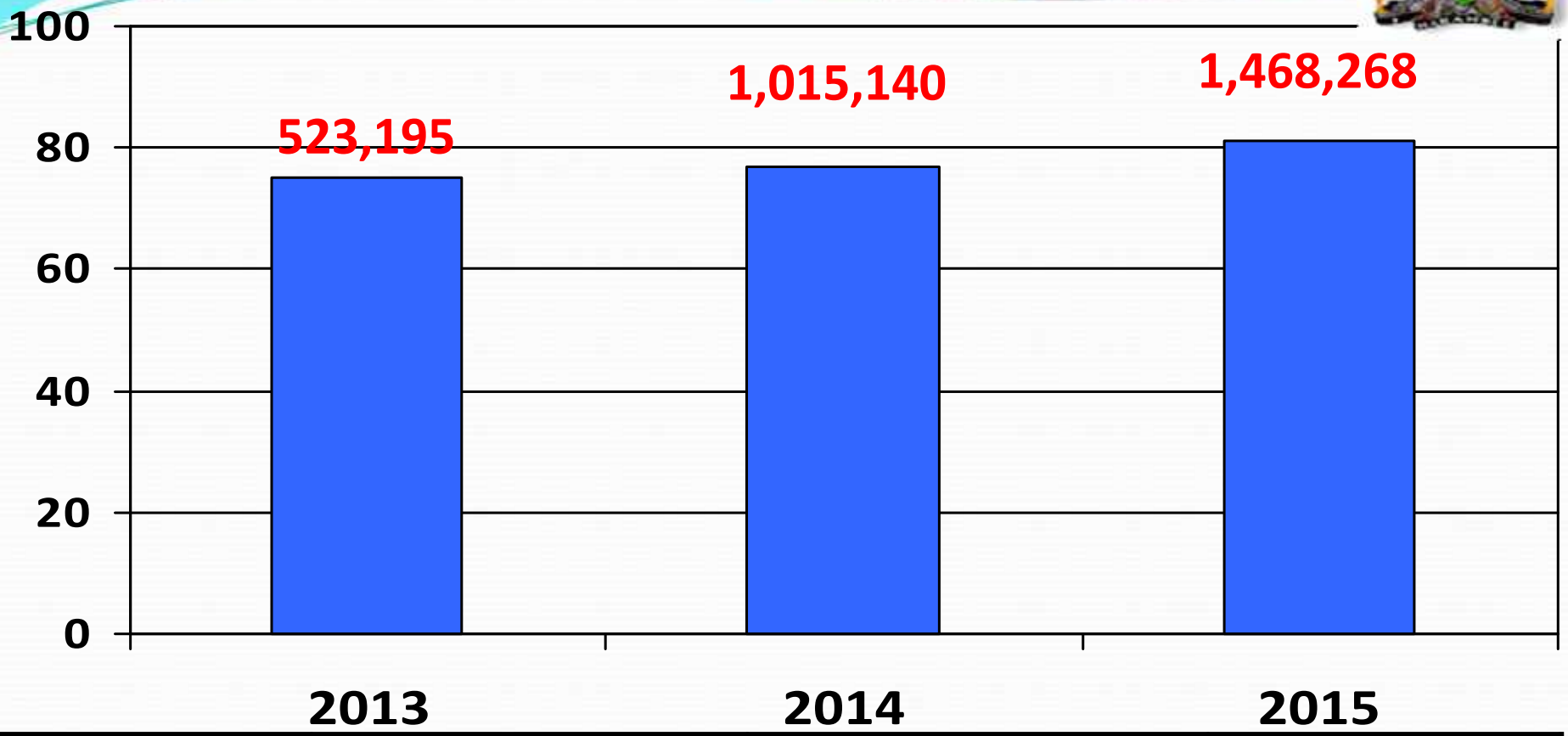
Measles & Rubella

- Highly infectious, humans are the only reservoir
- In 2000, measles was leading cause of vaccine preventable pediatric deaths, now 3rd after Pneumococcal and Rotavirus
- Rubella is a leading cause of congenital defects, 100,000 cases in developing countries annually (Year 2000)
- Primary objective of rubella vaccination is to prevent this
- Deaths and Disabilities from Measles and Rubella are completely preventable

Measles- Rubella Introduction & SIAs, Rationale

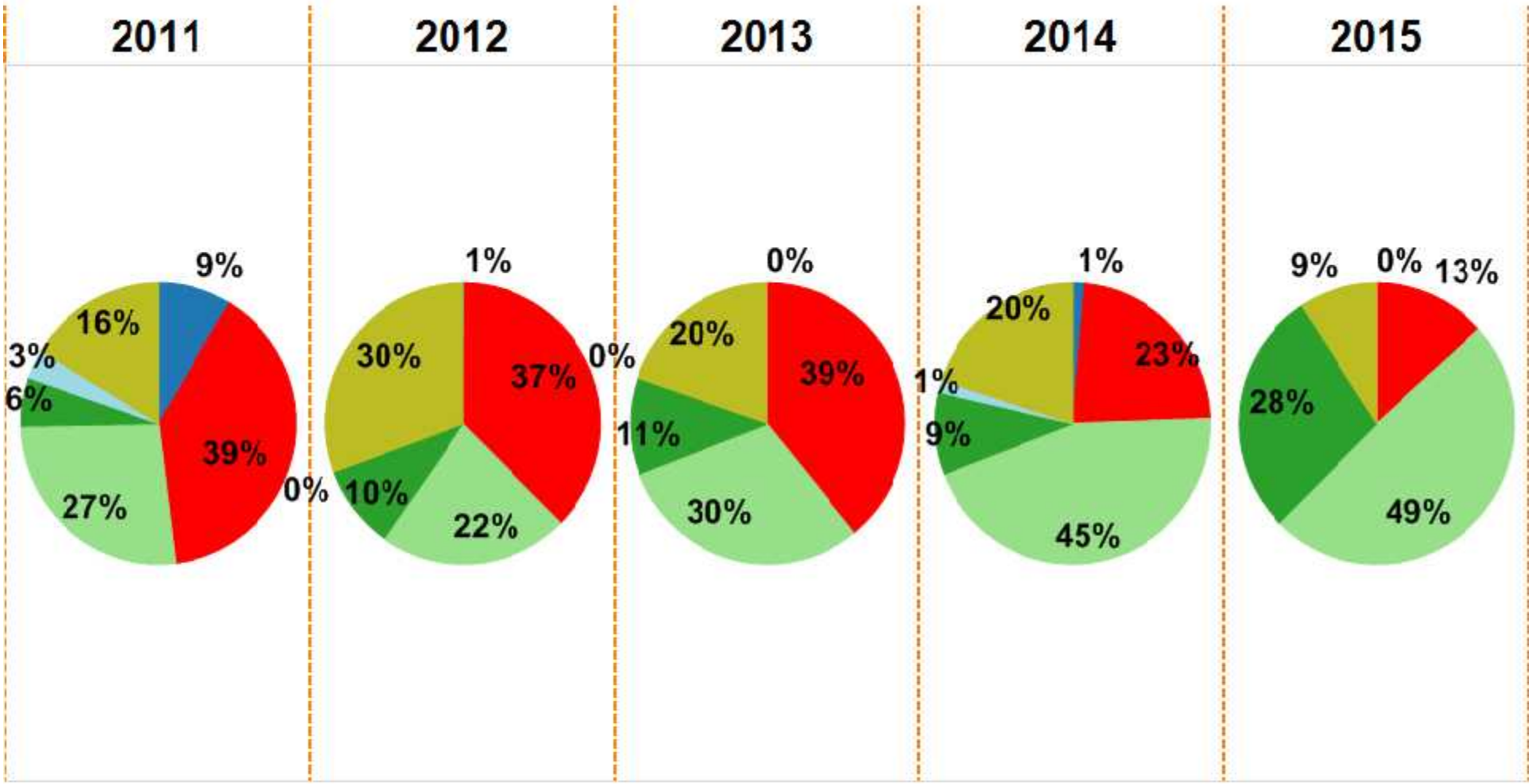
- 95% population immunity not achievable with only 1 dose (routine) even at very high vaccination coverage
- Only 85% of children vaccinated against measles develop immunity from the first dose
- Accumulation of susceptible children occurs over time (i.e. children with no immunity)
- High risk of outbreak when number of susceptible ≥ annual birth cohort
- Second opportunity for vaccination against measles needed to achieve & sustain high population immunity
- Need to conduct wide age range SIAs prior to Introduction of Rubella vaccine to reduce Risk of paradoxical increase in CRS Cases

Measles Coverage by year, Kenya,2013-2015



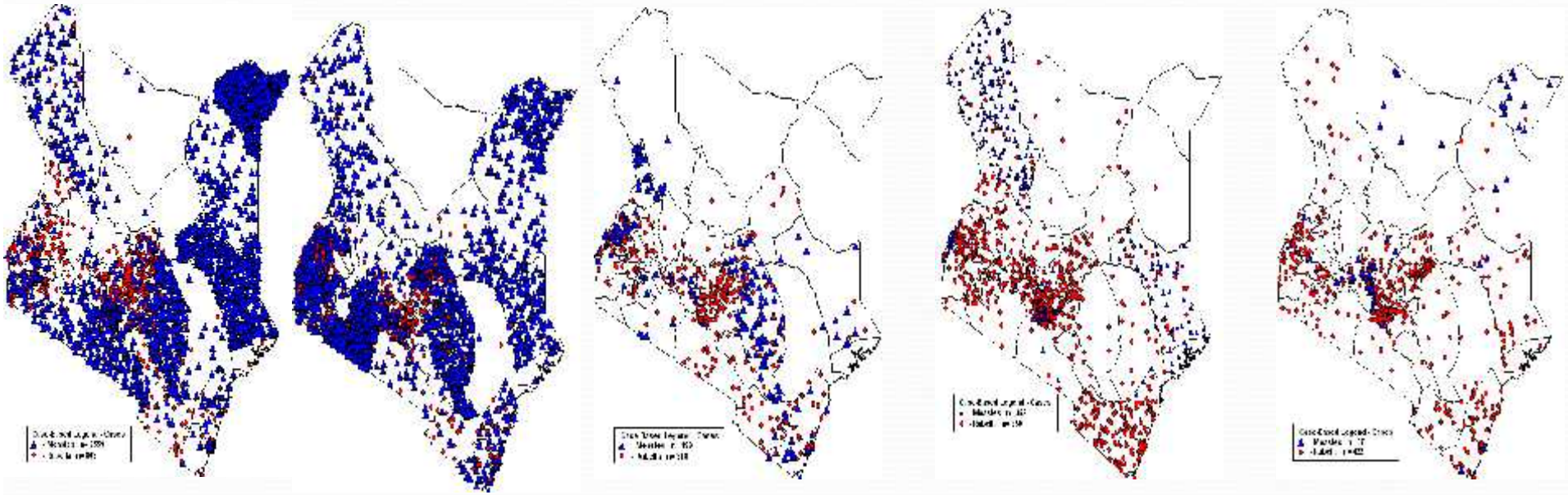
Measles Cov.	1,082,420 *(75%)*	1,129,057 *(78%)*	1,178,281 *(81%)*
Un-vaccinated	360,832 *(25%)*	322,587 *(22%)*	276,386 *(19%)*
Non Immune	162,363	169,358	176,742

Vaccination status of confirmed cases of measles by year



Distribution of measles and Rubella Cases in Kenya, 2011- 2015

2011 | 2012 | 2013 | 2014 | 2015



Measles & Rubella control strategies

- Strengthening routine immunization (RI)- at 9 & 18 months
- Providing a second opportunity for vaccination with measles vaccine:
  - Supplemental immunization (catch up and follow up)
  - Introduction of second dose of measles vaccine in RI
- Strengthening of case-based measles surveillance
- Strengthening of measles Case Management (including Vita A supplementation)

Next for Measles Rubella?, Kenya

- MR SIAs planned for 16th to 24th May 2016, target 18.9 million children 9months – 14 years
- Plans to introduce Measles Rubella vaccine into Routine immunization after SIAs
- Plans to integrate with Tetanus Toxoid sNIDs (in some high risk sub-counties)
- Logistics Required:
  - 21.8 million doses of MR vaccine, 23.5 million syringes
  - 42,000 health workers and 24,000 Volunteers
  - 20,000 vaccination centers, 2,100 vehicles
  - Total expenditure: KShs. 2.3 Billion

Immunization Key Issues,…….

- Understandably,…..vaccine safety gets more public attention than vaccination effectiveness,…..but vaccines are far safer than therapeutic medicines
- Did Jenner have it easy compelling people to comply?
- Most of the time the games played are according to rules that are not generally those of science
- The number of deaths & disabilities caused by traditional vaccine-preventable has Reduced dramatically over the years

Key issues…Considerations in introducing Immunization Interventions

- Is the magnitude of public health problem conclusively determined?
- Are the risk groups clearly identified?
- Ensured availability of an effective vaccine?
- Ability of vaccination services to cover > 80% of at-risk-population in order to break transmission
- Political Goodwill
- Cost Implications/ Cost effectiveness

A world free of Vaccine preventable diseases means NO child gets paralysed, BETTER quality of life, COST SAVINGS on resources spent on rehabilitation, treatment & time from work, and MORE resources available for other priority health needs

Immunization is all our responsibility

EVERY CHILD COUNTS!

Thank you