IRS for Malaria Elimination

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Reorientation of IRS (Vector control)

- <1 case/1000 at risk population
- From universal coverage to targeted implementation

- Targets
  - Transmission foci
  - Potential transmission foci
Types of transmission foci in malaria elimination phase

• **Residual active**: Transmission is occurring in an area that has had transmission within the past 2 years (or past two transmission seasons); it is effectively controlled with major reductions in malarial indicators after interventions.

• **New active**: Transmission is occurring in an area that has had transmission for less than 2 years or has never had local transmission. New active foci can be further subdivided into *first degree*, in which only the first generation of transmission has taken place (i.e. only introduced cases are present) and *second degree*, in which second- or later-generation malaria and indigenous cases are present.
Types of transmission foci in malaria elimination phase cont.

- **New potential**: Isolated imported, induced or relapsing cases are occurring during the transmission season in a receptive area that had no transmission in the past 2 years or more.

*Residual non-active*: There is no local transmission within the past 2 years in an area with a history of local transmission.

- **Cleared-up**: No local transmission has been recorded during the past 2 years in an area with a history of malaria and conditions that are suitable for transmission.
IRS in elimination

• Reduce dramatically malaria prevalence from low baseline to zero transmission

• Important to completely interrupt transmission in targeted foci
IRS in elimination cont.

• Linked to case-based investigations

• Delivered in an epidemic preparedness and response manner

• The frequency and timing of applications determined by the type of foci the program is dealing with
Objectives

• Reduce number of active transmission foci to zero

• Reduce receptivity and vulnerability in recent foci

• Prevent introduced and indigenous cases from producing secondary infections

• Prevent re-establishment of local transmission
IRS in the various types of foci

- **Residual active and new active**: targeted and intensified IRS to completely interrupt transmission

- **Residual non-active**: No IRS but vector surveillance continues if there is risk
IRS in the various types of foci cont.

• **New potential:** IRS to reduce vectorial capacity in order to minimize the risk of establishment of local transmission

• **Cleared-up:**
  – No IRS but vector surveillance in vulnerable & receptive foci
  – If risk is high, IRS can be considered to sustain malaria free status
Conclusion

• Scale down IRS at < 1 confirmed case / 1000 at risk population / year for 2 consecutive years

• Stop IRS at zero transmission for 2 consecutive years

• Consider IRS in highly vulnerable and receptive area in response to high risk (vectorial capacity)