Combining IRS & LLINs to achieve pre-elimination of malaria in Sri Lanka.

Dr. Rabindra R. Abeyasinghe
Project Director GFATM & Senior Consultant Community Physician, National Malaria Control Programme, Sri Lanka
Vectors of malaria in Sri Lanka

- *Anopheles culicifacies* (main vector, responsible for over 80% of transmission)

- *Anopheles subpictus*

- *Anopheles annularis*
Malaria cases reported in Sri Lanka 1999 – 2008.

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Anti Malaria Campaign
Directorate
History of vector control

• Extensive use of IRS for vector control since 1945 with DDT, 1977 with Malathion, 1994 with Lambda cyhalothrin & Fenitrothion.

• Rotational application of a combination of six insecticides for IRS since 1998/9 with rigid micro stratification of areas selected for IRS – LC, Fen, Eto, Del, Cyf, Bif

• Selective application of chemical larvicides Temephos & Pyriproxifen in known breeding sites
Stratification for IRS

- Selection of villages for IRS was based on
  - Reported incidence of malaria
  - % of falciparum malaria detected
  - Presence of migrant population groups including IDP
  - Proximity to known vector breeding sources, particularly rivers/streams

- Highest transmission areas were generally selected for IRS due to its proven efficacy in the country
Strategy used for combining IRS & LLINS

- IRS with proven efficacy was limited to highest transmission areas. Use was limited based on distribution of disease burden and seasonality.
- The early strategy for LLIN distribution was to target middle intensity transmission areas where IRS was withdrawn after blanket distribution of one net per family in selected villages.
- LLINs were also targeted for IDP families living in temporary shelters (often not suitable for IRS).
Current strategy for vector control

- IRS is mainly in areas with active transmission, particularly in the Northern & Eastern Provinces previously affected by the conflict & focal spraying around all reported cases
- Provision of LLINs to all families in IDP camps and families being resettled. Outside the conflict affected areas the accent is on preventing the reintroduction of malaria and sustaining malaria free status
- Increasing the use of less effective but eco-friendly interventions (Larvivorous fish, IPVM etc.)
Thank you.