Malaria Elimination: A Global Partnership Perspective

Richard W. Steketee MD, MPH

Director of Science

Malaria Control and Evaluation Partnership in Africa (MACEPA), PATH

Centers for Disease Control and Prevention
Public Health Grand Rounds, November 2010
“Now is the time to act. We should not ignore the shrinking of the malaria map, which has been successfully unfolding over the past century.”
Today’s opportunity for elimination success – why today?

African country example of a move toward elimination

A partnership perspective in transitioning from scale-up to elimination

Opportunities for CDC to make a difference:

- A perspective from outside
Malaria Landscape

- From Scale Up for Impact (SUFI) to Elimination
• From Scale Up for Impact (SUFI) to Elimination
Malaria Elimination: Why Today?

- Between the Global Malaria Eradication Program and the start of Roll Back Malaria (1975 – 2000) was a time of science.

- The scientists identified:
  - Prevention directed to the biology of the vector and able to be delivered proactively and to the most vulnerable.
Malaria Elimination: Why Today?

- The scientists identified:
  - Treatment with combined drugs to optimize efficacy and delay resistance
  - Diagnostics that can be deployed close to home and in facilities and can clarify where malaria transmission, illness, and death is occurring
The scientists are seeking:

- New/improved prevention, diagnostics and treatment
- New interventions (vaccines, larval control, repellants)

And we already have the ‘final intervention’ – surveillance for infection detection and transmission containment
Malaria Elimination: Zambia Example

Transmission intensity, 2006

- Map showing malaria transmission intensity in Zambia.
- Transmission intensity ranges from low to high, indicated by different colors on the map.
- The map includes a legend for parasite prevalence, with categories from < 0.1 to more than 0.5.
- Additional maps showing specific regions with detailed transmission data.
ITN, Insecticide-treated bed net
IRS, Indoor residual spraying
IPTp, Intermittent preventive treatment in pregnancy
Reported Malaria Cases per 1,000 and Numbers of RDTs Delivered in Kazungula, Zambia

Malaria cases per 1,000 population

ITNs and IRS introduced

981

ITN, Insecticide-treated bed net
IRS, Indoor residual spraying
RDTs, Rapid diagnostic tests
Reported Malaria Cases per 1,000 and Numbers of RDTs Delivered in Kazungula, Zambia

ITNs and IRS introduced

ITN, Insecticide-treated bed net
IRS, Indoor residual spraying
RDTs, Rapid diagnostic tests
Reported Malaria Cases per 1,000 and Numbers of RDTs Delivered in Kazungula, Zambia

Malaria cases per 1,000 population

ITNs and IRS introduced

RDTs introduced

Number of RDTs Used

ITN, Insecticide-treated bed net
IRS, Indoor residual spraying
RDTs, Rapid diagnostic tests
Incidence Rates for All Districts in Southern Province, Zambia

Malaria cases per 1,000 population

- Provincial
- Choma
- Gwembe
- Itezhi-tezhi
- Kalomo
- Kazungula
- Livingstone
- Mazabuka
- Monze
- Namwala
- Monze
- Siavonga
- Sinazongwe


Malaria Control and Evaluation Partnership in Africa (MACEPA)
A Partnership Perspective

- Partners: Elimination is on some but not all of their agendas
  - WHO, UNICEF, World Bank, UNDP
  - US-PMI
  - Bill and Melinda Gates Foundation
  - Roll Back Malaria
  - CDC?

  Consider embracing Elimination!
A Partnership Perspective on CDC Engagement

- Focus on Africa, but work elsewhere (you do this)
- Work with many partners (you do this)
  - US-President’s Malaria Initiative (PMI), WHO and others
- What will CDC do with its own resources and focus
  - Do “Control” via US-PMI (you do this)
  - Do “Science of Elimination” on CDC’s dime (do this more explicitly and bring CDC’s strengths)
  - Do “Capacity Building” from CDC’s strengths
Surveillance as an intervention to reduce transmission

"**Surveillance** indicates epidemiological and remedial action.

…to detect cases...these are registered, treated and followed up with an investigation of the source and other possible cases;

…to discover transmission, establish its causes, eliminate residual foci, and to end transmission and avoid its resumption; and

…to substantiate that elimination has been achieved.”

CDC – Doing “Science of Elimination”

- Surveillance as an intervention to reduce transmission
  - Diagnostics
  - Use of antimalarial drugs
  - Investigation procedures
- Test this “intervention” and its ability to contain transmission
CDC – Doing “Capacity Building”

- Capacity development for information management (building on surveillance for transmission reduction)
  - A “Stop Malaria” model (take a lesson from “Stop Polio”)
  - FELTP/FETP model in malaria-endemic countries
- Partner for this work

FELTP, Field Epidemiology Laboratory Training Program
FETP, Field Epidemiology Training Program
A Partnership Perspective on CDC Engagement

- Elimination and eradication require a long view…
  - and CDC should exercise its strength in “sustained public health focus” amidst competing priorities
Global Partnership Role for Elimination

- Bring a durable commitment
- Provide leadership in the “science of elimination”
  - Development of new tools and testing new strategies
  - Train the next generation
- Actively seek strategic partnerships en route to malaria elimination

- Elimination/Eradication is not for the faint of heart!