Need for malaria elimination planning tool

● Progress in fighting malaria worldwide

● Magnitude of progress in some countries has raised question of malaria elimination, even in historically high burden countries

● Countries considering elimination would benefit from tool to provide rigor for program planning

● WHO and partners (Clinton Health Access Initiative, Imperial College, Global Health Group, Johns Hopkins, University of Southampton), supported by BMGF, have been developing Elimination Scenario Planning (ESP) tool
ESP tool components

- ESP Manual
  - Reviews key concepts in elimination planning
  - Technical, Operational, Financial feasibility of elimination

- Malaria transmission model (P. falciparum, Africa)
  - Establish baseline transmission level
  - Explore effect of different combinations of interventions
    (LLINs, IRS, IPTi, SMC, MDA/MSAT, vaccine)
Concept of effective coverage

- **Gaps:**
  - **Distribution:** Households receive nets
  - **Use:** Nets are used nightly
  - **Effectiveness:** Insecticide maintained at effective potency and net in good condition
  - **Total:** Fraction fully covered by nets

- **Net:**
  - Net not protective
  - Vectors bite outdoors
  - Vectors bite indoors during hours when nets are used

- **Households missed:**
  - 0%
  - 100%
Brief malaria transmission model description

- Individual-based simulation model
- Fit from parasite prevalence data from 34 African transmission settings
- Allows variation in baseline conditions and effect of different combinations of interventions
- Gives output in several formats—parasite prevalence, incidence, EIR—and shows timeline

Model publicly available
http://www1.imperial.ac.uk/publichealth/departments/ide/research_groups/malaria/malariatools/
Malaria transmission model interface
Estimated reductions in malaria prevalence from various baselines, incorporating operational factors.

Perfect intervention
If 80% ITN coverage

- + Decreased ITN use
- + Decreased ITN effectiveness
- + Some outdoor biting
ESP next steps

- Manual and software evaluated in workshop in Banjul with NMCP staff and partners from The Gambia and Senegal
- Revised manual and software based on workshop feedback; incorporating feedback from further review
- Finalize with WHO and partners, release and dissemination of ESP during 2013
- Considering whether toolkit could be modified or extended for malaria program planning in other settings
Input from MPAC on the way forward for ESP

- **Comments on ESP toolkit**

- **Comment on possible future directions for ESP**
  - Should ESP toolkit be modified to function as a general program planning tool?
    - Use existing model; cost component
  - Should ESP toolkit be extended to address low transmission *P. falciparum* outside Africa?
    - Updated model; artemisinin resistance containment
  - Should ESP toolkit be extended to cover settings where *P. vivax* is predominant?
    - Updated model; in line with strategy development