T3: Test. Treat. Track

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Malaria diagnostic testing – the facts

Important recent progress

- Rate of testing in WHO African Region rose from < 5% in 2000 to 45% in 2010 (among reported malaria cases in the public sector)
- Worldwide, number of RDTs delivered by manufacturers increased from 45 million (2008) to 88 million (2010)
- 90 endemic countries have adopted policy of providing malaria diagnostic testing for all age groups (37 in WHO African Region)

But

- Most endemic countries in Africa – esp. highest burden countries – are still far from achieving universal access to diagnostic testing
- Number of diagnostic tests carried out in 2010 in Africa was less than half the total number of ACTs procured and distributed
- In half of all endemic countries in Africa, over 80% of cases are still treated without diagnostic testing
Malaria diagnostic testing – required next steps

- Countries need to move towards universal diagnostic testing
  - Quality-assured, relatively inexpensive RDTs are available, making it possible to move testing beyond health facilities and into communities;
  - Testing improves differential diagnosis and fever management, diminishes unnecessary use of ACTs, and provides accurate surveillance data

**Key WHO recommendations**
- Every suspected malaria case should be confirmed by microscopy or RDT prior to treatment;
- All diagnostic tools must be quality-assured across all levels of the health system;
- Scale-up of malaria diagnostic testing should be integrated with efforts to improve the management of other febrile illnesses.
Malaria treatment – the facts

Important recent progress

● In 2010, 181 million ACT courses were procured worldwide in the public sector – up from 158 million in 2009, and just 11 million in 2005

● By the end of 2010, 84 countries had adopted ACT as the first-line treatment for *Plasmodium falciparum* malaria

● In 2010, 60 countries were providing ACTs free of charge for all age groups in the public sector

But

● Despite availability of effective, high-quality antimalarials, millions of people in endemic countries still lack ready access to appropriate treatment

● Many patients are treated in private sector with oral artemisinin-based monotherapies, and antimalarials that do not meet quality standards

● Growing parasite resistance to artemisinins in Greater Mekong sub-region is major threat to malaria control efforts, requiring urgent action
Malaria treatment – required next steps

- Countries need to ensure universal access to antimalarial treatment
  - A scale-up of quality-assured, effective antimalarials will result in dramatic reduction of malaria-related morbidity and mortality
  - Need to intensify efforts to improve drug quality, strengthen regulation of pharmaceutical market
- *Guidelines for the Treatment of Malaria (Second edition) (2010)* contains all of WHO’s evidence-based recommendations for all endemic regions.

**Key WHO recommendations**
- After diagnostic confirmation, every uncomplicated case of *P. falciparum* malaria should be treated with a quality-assured ACT;
- Every severe case of *P. falciparum* malaria should be treated with IV or IM artesunate, followed by full ACT course;
- Antimalarials should be routinely monitored for therapeutic efficacy.
In low and middle-income countries, less than 10% of deaths are registered; reliable cause-of-death statistics not available for majority of endemic countries.

Not possible to determine malaria trends with certainty in 38 of 99 countries with ongoing transmission.

Scale-up of malaria interventions increases need for timely and accurate information on incidence.

Increasing availability of RDTs allows for tracking of confirmed cases and better targeting of resources.
Surveillance for malaria

Two new global manuals now available

- Providing guidance to endemic countries on the operation of malaria surveillance systems for control and elimination
- Focusing on program implementation and complementing other existing guidance on malaria indicators
- Updated surveillance guidance has not been issued by WHO since Global Malaria Eradication Programme era

Launched in Namibia by WHO Director- General (24 April 2012)
Content of surveillance manuals

- **Main focus of two volumes**
  - Routine information systems, decentralized analysis, interpretation and use of surveillance data;

- **Structure of documents**
  1. Overview of malaria surveillance in different phases of malaria control;
  2. Key concepts in malaria surveillance;
  3. Data recording, reporting, analysis and use;
  4. Establishing surveillance systems;
  - Annexes
    - Diagnostic tests/ quality assurance;
    - Core surveillance indicator;
    - Registers, case investigation forms, report forms, sample analyses.
Surveillance in control phase  
(high and moderate transmission settings)

**Health facility level**
- Registers of individual cases kept – maybe as part of outpatient register;
- Aggregate data reported to district and higher levels;
- Case-based surveillance of malaria admissions and deaths: to respond to cases of severe disease and attain a target of near-zero malaria deaths;
- Cases graphed on a monthly basis to assess the extent to which control measures are reducing the incidence of malaria.

**District/ national level**
- Cases and deaths summarized on a monthly basis through five control charts to assess the success of malaria control interventions and identify trends that need an urgent response;
- Analysis is also undertaken by health facility catchment area/ district in order to prioritize activities.
Surveillance in control phase  
(low transmission settings)

**Health facility level**
- Registers of individual cases kept;
- Aggregate data reported to district and higher levels, *plus* line-lists of admitted patients and deaths, *plus* when caseloads permit lists of all confirmed cases;
- Case-based surveillance of malaria cases: aim to identify locations or population groups with highest malaria incidence;
- Cases are graphed on a weekly monthly basis to assess identify trends that require attention and mapped by village to identify clusters.

**District/ national level**
- Cases and deaths summarized monthly through five control charts;
- Analysis undertaken by health facility catchment area/ district to prioritize activities;
- Register of severe cases and deaths maintained and investigations undertaken in order to identify and address program weaknesses.
Surveillance in elimination phase

Health facility level

- Confirmed cases immediately notified to district & central levels;
- Full investigation of each case (including additional blood sampling) to determine if case imported, locally acquired (introduced, indigenous, relapsed) or induced;
- Each new focus of transmission investigated (including entomological investigation). Focus classified and status updated continuously;
- Health facilities & districts monitor extent of surveillance in high risk foci - comparing number of diagnostic tests done with number expected.

District/ national level

- Databases kept of malaria case investigation forms, foci investigation forms, and a foci register with changes in status;
- Maps kept showing distribution of cases by household, vector breeding places, possible sites of transmission etc;
- National reference laboratory reconfirms all positive test results and a sample of negative test results, and organizes testing panels for laboratories QA network;
- Full set of documentation kept at national level ready for certification.
T3: Test. Treat. Track. initiative

Coordinated international effort needed

- To support countries in scale-up of diagnostic testing, treatment and surveillance
- End goal is to ensure that
  - Every *suspected* malaria case is tested
  - Every *confirmed* case is treated with a quality-assured antimalarial medicine
  - The disease is tracked through timely and accurate surveillance systems
T3: Test. Treat. Track. initiative

Need to move from set of recommendations to **scale-up**

- Dedicate financial resources and intensify advocacy efforts
- Provide assistance to countries to develop scale-up strategies
  - Support vertical scale-up (institutionalisation)
  - Support horizontal scale-up (expansion)
- Develop case studies, share lessons learned, strengthen evidence base
- Reach out to wider audiences

**RBM CMWG can play a key role**
WHO Global Malaria Programme: four key roles

I. Set, communicate and promote the adoption of evidence-based norms, standards, policies, and guidelines

II. Keep independent score of global progress

III. Identify threats to malaria control and elimination as well as new opportunities for action

IV. Chart the course for malaria control & elimination

Develop approaches for capacity-building, systems strengthening, and surveillance
MPAC Background

- Scale up of malaria control and major investments in research = rapidly evolving policy environment for new tools and technologies (and end of one-size-fits-all approach)
- Setting policy, norms and guidance on malaria control is primary role of WHO Global Malaria Programme (GMP)
- MPAC provides independent strategic advice and technical input to WHO for development of policies related to malaria control & elimination
- GMP dedicated to a policy setting process that is more:
  - Timely, transparent, and accountable
- 2011 was a critical year in the redesign, launch and implementation of a strengthened policy setting process
Designing and Launching MPAC

- March 2011 - GMP Advisory Group on policy setting convened to review previous and existing processes, consider successful models, propose draft ToR
- April-June 2011 - Draft ToR (based on SAGE) received extensive input from over 40 external stakeholders
- August 2011 – ToR approved by WHO Director General
- September-October 2011 – Open call for nominations, 100 applications received & reviewed by independent selection panel
- November 2011 – 15 nominees appointed as MPAC members, selected for their experience and broad expertise
- December 2011 – all MPAC related information available online
- January/February 2102 – Inaugural meeting
- April 2012 – MPAC report published in Malaria Journal
MPAC: organogram

Evidence Review Groups

ERG a
ERG b
ERG c

SAGE

Other WHO departments

JTEG (with IVB)

VCAG (Proposed, with NTD)

WHO GMP Secretariat

WHO DG

WHO malaria policy recommendations and guidelines

WHO COs

MoH and NMCPs

RBM: Secretariat, WGs and SRNs
Interface between Roll Back Malaria Partnership (RBM) and WHO-GMP

- RBM Secretariat is hosted at WHO
- RBM Roles
  - Advocacy
  - Resource mobilization
  - Partner harmonization
- Important to optimize interface between RBM mechanisms and WHO-GMP
  - Example: MPAC meetings are offset from RBM Board meetings by 3 months to allow for dissemination of new policies and input into next agenda
Potential roles of RBM CMWG in relation to T3

- Mapping of in-country partners capable of supporting National Malaria Control Programmes to scale-up T3
  - Diagnostic testing
  - Treatment
  - Surveillance
- Harmonizing the work of in-country partners in support of T3
  - Ensuring dissemination of global guidance documents
  - Assisting with national adaptation of global norms
- Creating consensus among partners with regard to implementing T3; how best to do this?
- Identifying south-south capacity building opportunities