Getting malaria control back on track

Making chemoprevention contribute

3rd October 2019 Geneva

Global Malaria Programme

World Health Organization
Number of malaria cases worldwide, 2000–17

(Number of cases in millions for each year from 2000 to 2017.

Getting back on track

- New response launched by WHO and RBM Partnership at high-level event in Maputo (Nov 2018)
- Initial focus on the 10 + 1 highest burden countries
- Lessons learned will be applied to other countries with a high burden of malaria

Four key mutually reinforcing response elements

- Best global guidance
- Political commitment
- Strategic use of information
- Coordinated response
“What can we do with all the tools... to really make a difference in these countries?”

Dr Tedros
2 October 2019
Drug-based strategies to prevent malaria

- Chemoprophylaxis: e.g., in non-immune travellers or specific risk groups (e.g., children in endemic settings with sickle cell disease)

- Mass Drug Administration (MDA), the delivery of malaria treatment to every member of a defined population or geographic area at the same time
  - Accelerate progress towards interruption of transmission in pre-elimination settings
  - Ameliorate the worst effects of malaria in epidemics or complex emergencies

- Intermittent Preventive Treatments (IPT) e.g., infants (IPTi), women in pregnancy (IPTp), Seasonal Malaria Chemoprevention (SMC) for children 3-59 months

- Boundaries between chemoprophylaxis, MDA and the IPT’s are blurred
  - Practical challenges of regular MDA results in something closer to mass IPT
  - High coverage of frequent MDA in some population subgroups may result in their chemoprophylaxis

- “Chemoprevention” - the general approach of using malaria drugs to prevent disease
  - Administration of treatment doses of anti-malarial drugs to specified groups, irrespective of signs or symptoms of disease, or the presence of *Plasmodium* infection
## IPTi, SMC & IPTp

<table>
<thead>
<tr>
<th></th>
<th>To who</th>
<th>Where</th>
<th>How</th>
<th>When</th>
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</thead>
<tbody>
<tr>
<td><strong>IPTi</strong> (SP)</td>
<td>Infants</td>
<td>Areas of moderate to high malaria transmission in Africa</td>
<td>Through the routine vaccination schedule</td>
<td>All year around</td>
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<tr>
<td><strong>SMC</strong> (AQ+SP)</td>
<td>Children aged 3–59 months</td>
<td>Highly seasonal malaria transmission areas in the Sahel sub-region in Africa</td>
<td>Mass delivery campaigns</td>
<td>During 4 months of high transmission</td>
</tr>
<tr>
<td><strong>IPTp</strong> (SP)</td>
<td>Pregnant women</td>
<td>Areas of moderate to high malaria transmission in Africa</td>
<td>At each ANC visit from 2nd trimester, 1 month apart, at least 3 doses during pregnancy</td>
<td>All year around</td>
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(1) World Malaria Report 2018

Slide courtesy of Maria Tusell et al
Intermittent Preventive Treatments

Implementation fragmented, strategies under-utilised

2016: 15 million children in 12 countries protected with SMC (total eligible population ~25m)

39 countries implementing IPTp

IPTi only adopted in Sierra Leone, in 2018
Policy process for chemoprevention strategies

IPTp timeline

WHO Expert Committee on Malaria

A Strategic Framework for Malaria Prevention and Control During Pregnancy in the African Region

July 2007: TEG

1998

“Intermittent treatment with an effective, preferably one-dose antimalarial drug, provided as part of antenatal care, should be made available…”

1994-1999: Large scale trials in East Africa with IPTp-SP at the beginning of 2nd and 3rd trimesters

2004

“should receive at least 2 doses of IPT after quickening”

2007

“all countries in stable malaria transmission situations should deploy and scale up the strategy of SP-IPTp”

Ter Kuile et al, 2007: Systematic review on the effect of SP resistance on the efficacy of IPTp

July 2012: ERG

September 2012: MPAC

October 2012: Updated WHO policy

2012

IPTp with SP is recommended for all pregnant women at each scheduled antenatal care visit

Kayentao et al, meta-analysis of 7 trials which compared ≥3 vs 2 doses of IPTp-SP

MiP Consortium monitoring studies

April 2013: WHO Policy brief

July 2013 ERG

September 2013: MPAC

2013

“should be considered by countries with specific patterns of SP resistance, or a persistent reduction in malaria transmission and by those considering mefloquine…”

WHO urges national health authorities to disseminate the recommendations from 2012 widely and ensure its correct application

Studies on the effectiveness of IPTp-SP in areas of resistance

Multicenter clinical trials that evaluate the efficacy and safety of mefloquine as IPTp

Revision of the April 2013 WHO policy brief

WHO recommendations on antenatal care for a positive pregnancy experience

2016

Antenatal care models with a minimum of eight contacts are recommended
Policy process for chemoprevention strategies

IPTi and SMC timelines

IoM: Institute of Medicine

Slide courtesy of Maria Tusell et al
Experience scaling up - SMC

UNITAID investment to evaluate the effectiveness, operational feasibility (rainy season, often remote or nomadic Sahelian populations) and cost of delivering SMC at scale

Support for prequalification of a child-friendly dispersible formulation of SP-AQ

2016: 15 million children in 12 countries protected with SMC (total eligible population ~25m)

Global Malaria Programme
Age patterns of infection, disease & death are different

- Marked seasonality
  - Low transmission intensity

- No marked seasonality
  - High transmission intensity

Enabling implementation of chemoprevention

1. **Implementation optimisation** - to reduce the incidence of disease, severe disease and death in currently eligible areas
   - UNITAID investments in SMC and IPTp are examples of targeted activities to catalyse improved use of chemoprevention in recommended settings
   - Additional investments may stimulate broader uptake of chemoprevention and help build demand for this highly cost effective family of strategies

2. **Review existing guidance** and constraints on the use of chemoprevention
   - E.g. chemoprevention & resistance
Research to guide the broader use of chemoprevention

• Implementation research: unlock the potential of existing strategies and drugs
  • Should geographic targeting / criteria for intensity of seasonality for SMC be relaxed?
  • Should the age groups targeted by IPTi and/or SMC be relaxed?
    o Improved malaria control increases the age group most affected by malaria
  • Can delivery of chemoprevention be enhanced through better integration with routine platforms?

• Other forms of chemoprevention
  • Post-discharge malaria chemoprevention
  • IPT in school children

• Can combined delivery of chemoprevention with other interventions (e.g. azithromycin) reduce all-cause mortality?

• What are the target product profiles for new drugs - and novel formulations - for malaria chemoprevention?

• Ensure availability of quality-assured drug supply
Planned discussions

Technical Consultation on Seasonal Malaria Prevention: Evidence for policy review

14 to 15 October 2019

Technical Consultation to Review the Role of Drugs in Malaria Prevention for People Living in Endemic Settings

- Based on existing policies for malaria chemoprevention and experience with their implementation, define strategies to maximise the impact of malaria medicines on mortality, morbidity and transmission.
- Define the evidence gaps and priority research needed to update WHO policies on malaria chemoprevention.

16 to 17 October 2019
Agenda overview

• Summary of the SMC consultation
• IPTp: Evolving evidence base, barriers & facilitators, changes in antenatal guidelines, delivery approaches
• IPTi: experience with implementation, why has uptake been limited?
• MDA: evolution of evidence base and policies, experience in emergencies & fragile situations
• IPT in school children, post discharge
• The drugs – resistance, product profiles
What is an ‘intervention’?

• MDA, SMC, IPTp, IPTi
  • All distribute antimalarial medicines to individuals at risk, without knowing their malaria infection status
  • All aim to clear any existing, and to prevent new, infections
  • Different target groups, drugs and delivery approaches

Are they different interventions or a range of strategies to deliver what is basically the same intervention?
Chemoprevention targets people at high risk of malaria

The improved use of chemoprevention has the potential to form an impactful component of the response to the ongoing high burden of malaria disease and death.