

WEBINAR: MiP M&E brief



John Aponte
Surveillance Team, WHO/GMP
21th January 2021

Global **Malaria** Programme



**World Health
Organization**



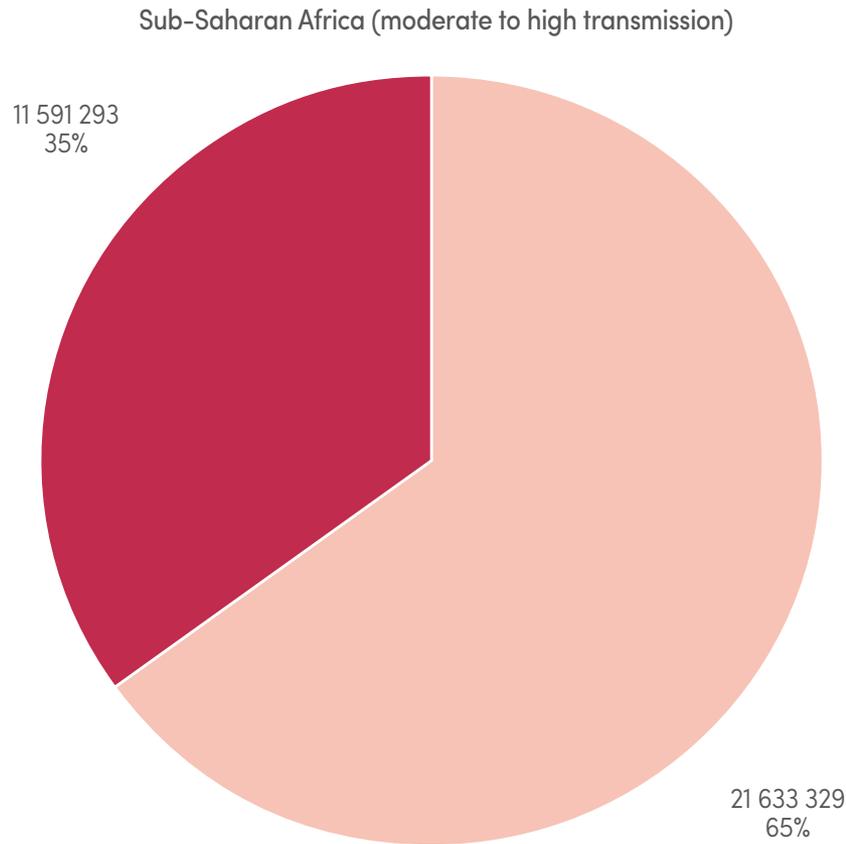
Malaria infection during pregnancy has substantial risks for the pregnant woman, her foetus and the new born child.

- Severe disease and death of the mother
- Parasite sequestration can lead to increase maternal anemia with a increase in risk of death after delivery
- Important contributor to stillbirth and preterm birth
- Placental infection can lead to a child growth retardation and poor cognitive outcomes
- It is a major risk factor for perinatal, neonatal and infant mortality.

Estimated prevalence of exposure to malaria infection during pregnancy

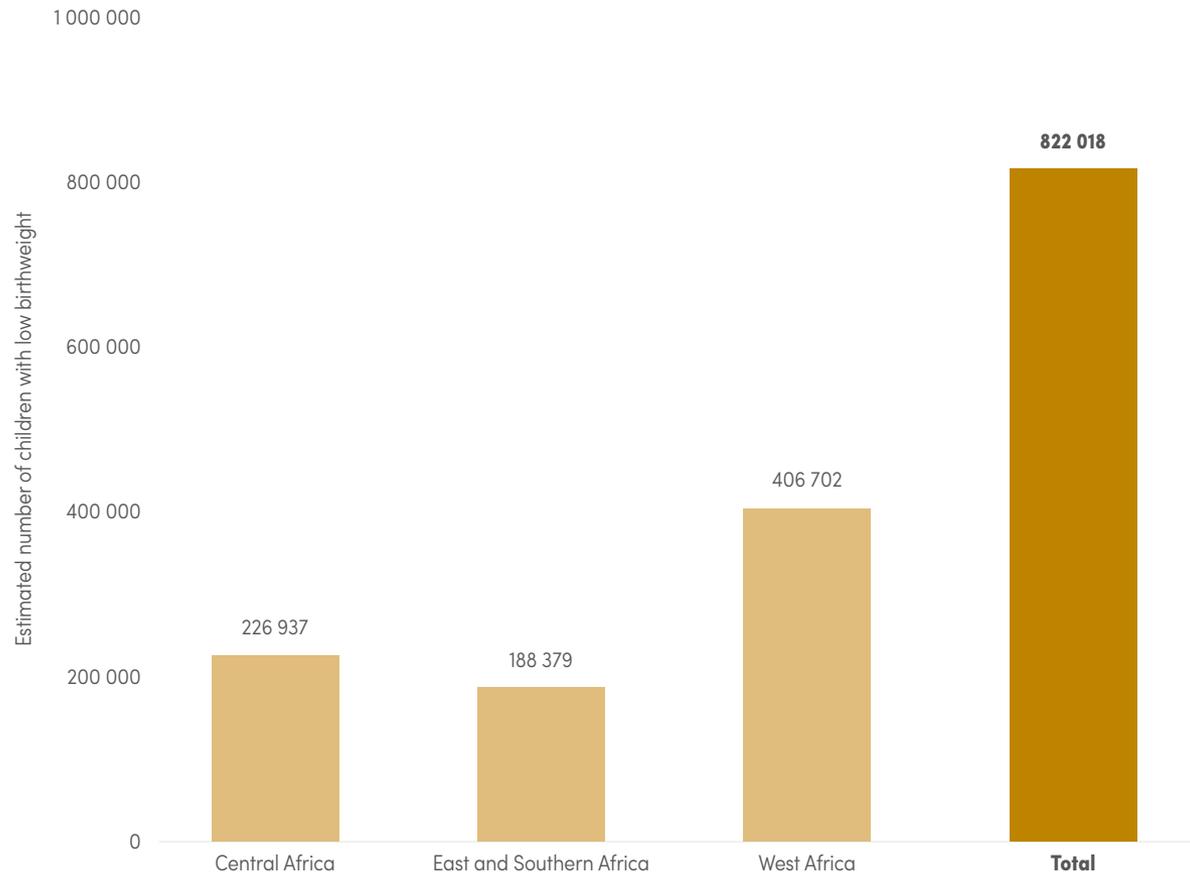


■ Pregnancies with malaria infection ■ Pregnancies without malaria infection



Source: World malaria report 2020

Estimated number of low birthweights due to exposure to malaria infection during pregnancy



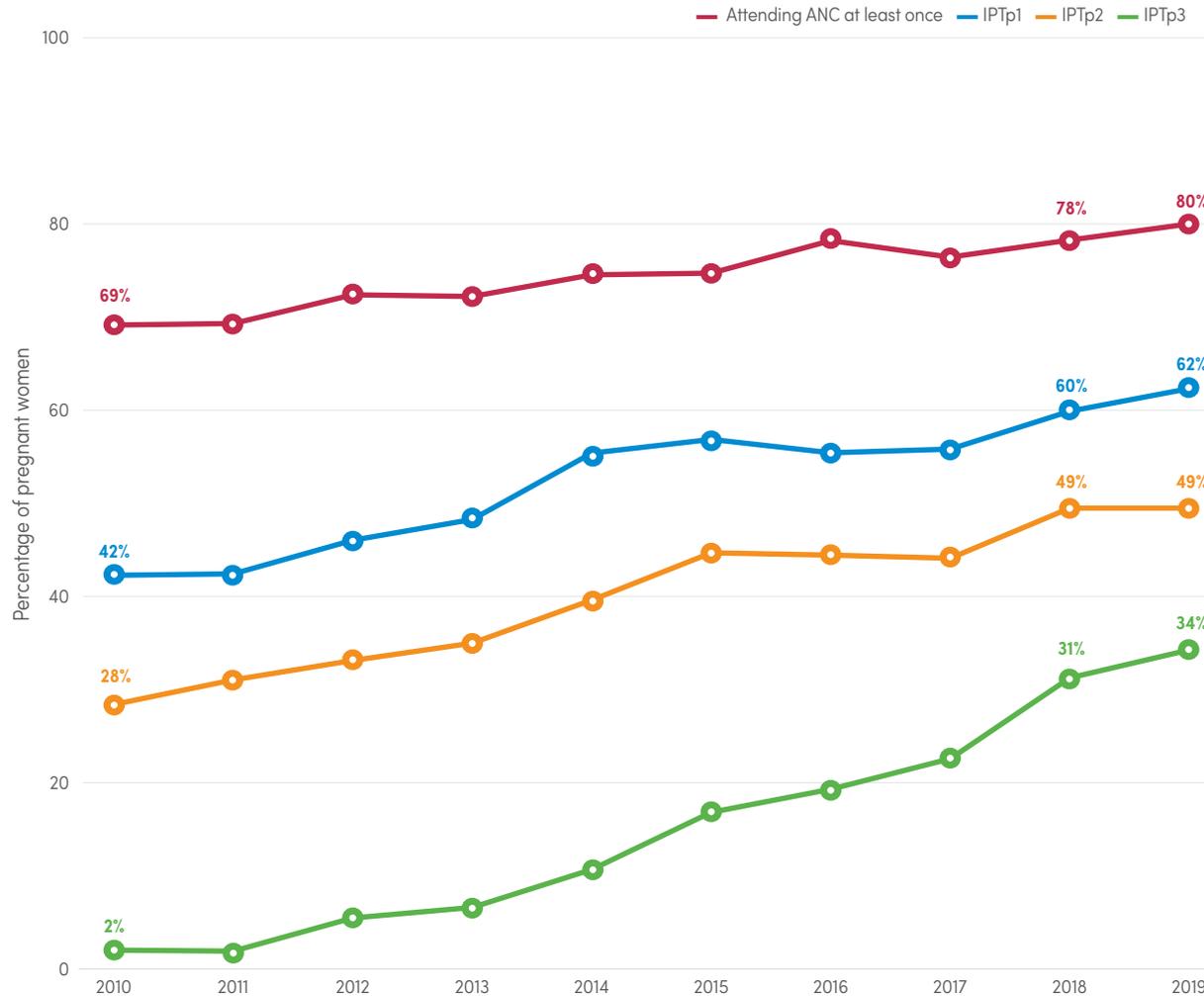
Source: World malaria report 2020



- The World Health Organization (WHO) recommends a package of interventions for controlling malaria and its effects during pregnancy, which includes:
 - The promotion and use of insecticide-treated nets (ITNs),
 - The administration during pregnancy of intermittent preventive treatment with sulfadoxine-pyrimethamine (IPTp-SP), and
 - Appropriate case management through prompt and effective treatment of malaria in pregnant women (1).

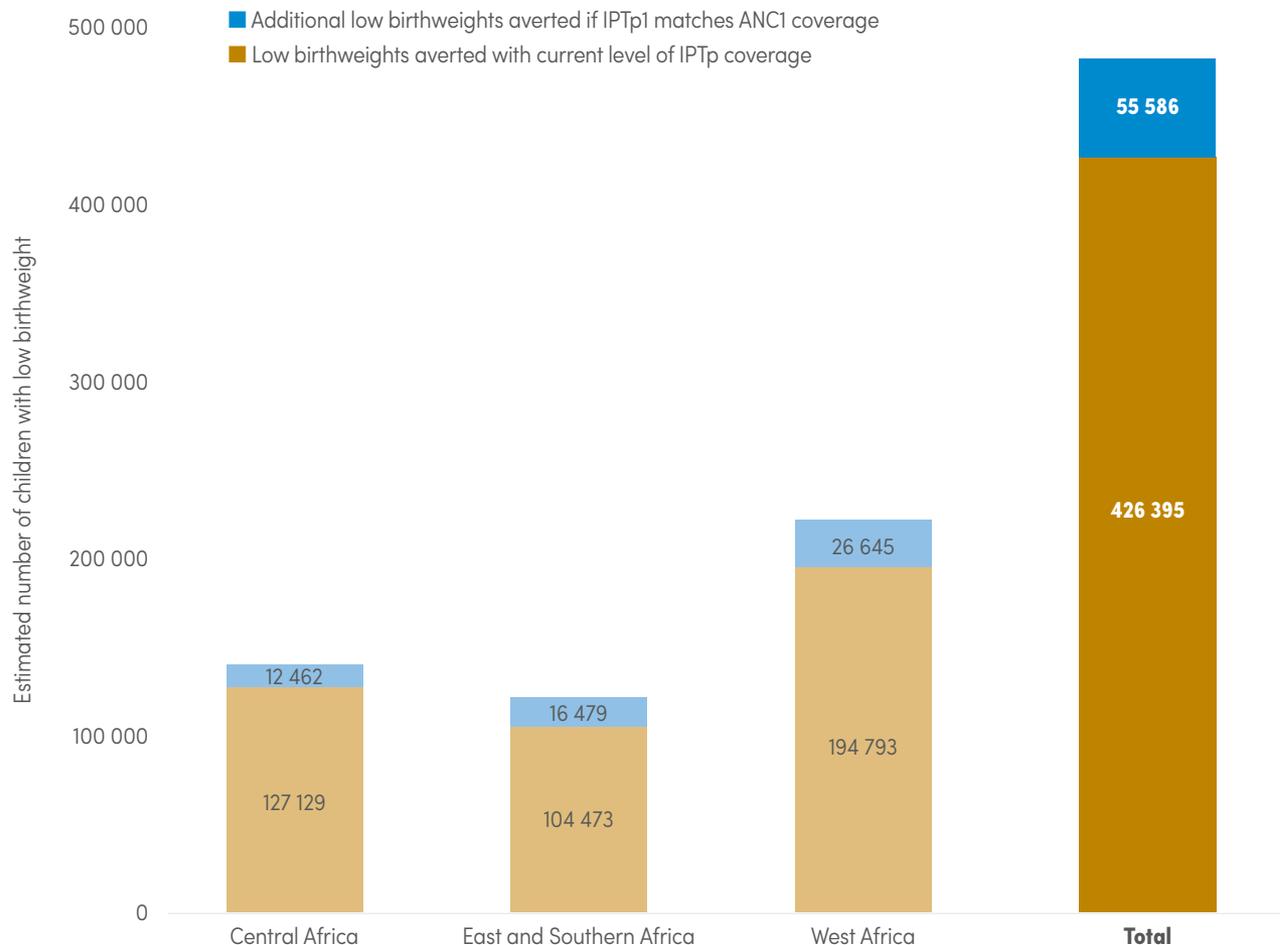
Source: WHO/HTM/GMP/2014.4 policy brief

Estimated percentage of pregnant women attending an ANC clinic at least once and receiving IPTp, by dose



Source: World malaria report 2020

Estimated number of low birthweights averted



Source: World malaria report 2020

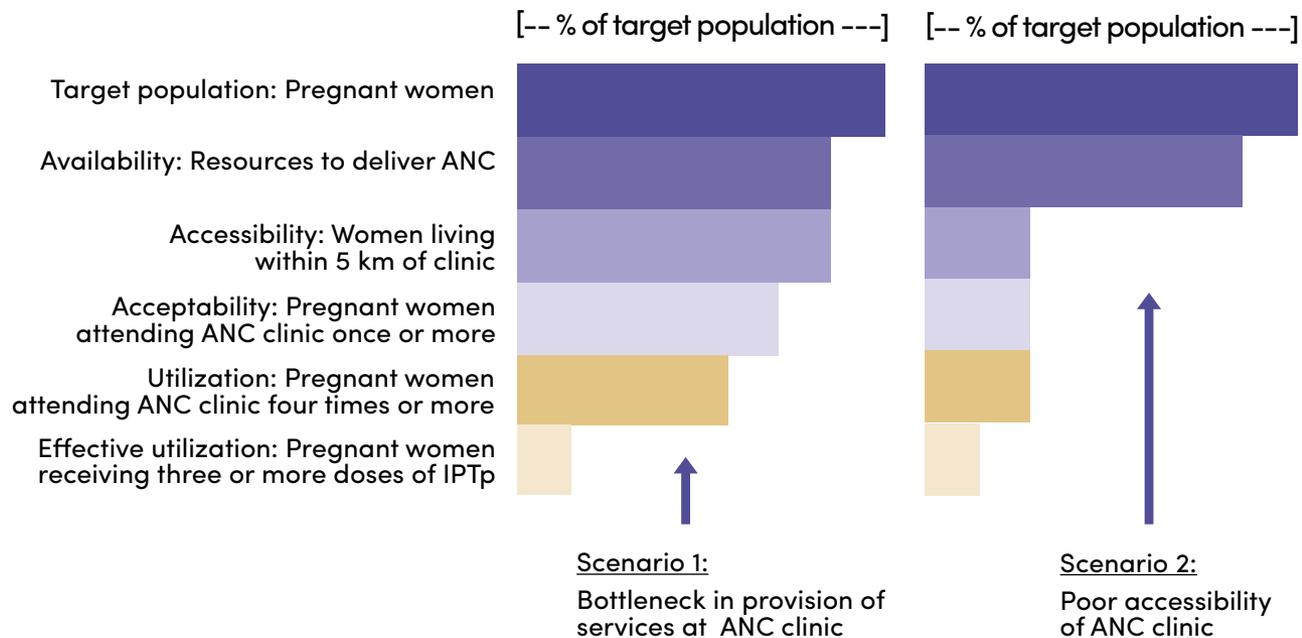
Recommended indicators for monitoring malaria programs and implementation of the GTS



Indicators highly relevant in high transmission intensity, and potentially relevant in low and very low transmission intensity, using Routine reporting system and/or Household surveys

No	Indicator name	Numerator	Denominator
OUTCOME INDICATORS			
3.1	Proportion of pregnant women who received three or more doses of IPTp	Number of pregnant women who received three or more doses of IPTp	Number of expected pregnancies
3.2	Proportion of pregnant women who received two doses of IPTp	Number of pregnant women who received two doses of IPTp	Number of expected pregnancies
3.3	Proportion of pregnant women who received one dose of IPTp	Number of pregnant women who received one dose of IPTp	Number of expected pregnancies
3.4	Proportion of pregnant women who attended antenatal care at least once	Number of first antenatal clinic visits	Expected number of pregnancies

Source: WHO. Malaria surveillance monitor & evaluation: A reference manual



Source: WHO. Malaria surveillance monitor & evaluation: A reference manual



- **Barbara Rawlins, USAID**

- Senior Implementation Research Advisor, USAID | Bureau for Global Health, Office of Maternal and Child Health and Nutrition | Research and Policy Division.)

Opening Remarks

- **Lia Florey, PMI**

- Malaria technical advisor for USAID – PMI

Global relevance

- **Lolade Oseni, Jhpiego**

- Senior advisor, Actionable measurement & learning at Jhpiego

Country-level application



Presentation of the Malaria in Pregnancy Monitoring and Evaluation Brief: Purpose, Background, and Collaborators

Barbara Rawlins, Senior Implementation Research
Adviser
USAID | Office of Maternal and Child Health and
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Research & Policy Division
January 21, 2021

AMY FOWLER/USAID

Purpose of the Brief

- To provide malaria endemic countries, particularly country-level government and private-sector stakeholders and policymakers, with practical guidance on monitoring and evaluation (M&E) of malaria in pregnancy (MiP) services



Photo Credit: Jhpiego/Allan Gichigi

Background

- MiP is a major public health problem in malaria endemic countries, contributing to preventable morbidity and mortality among pregnant mothers and their babies
- Ministries of health (MOHs) require timely and high-quality information to inform program planning and management for the provision of MiP interventions, and to track progress toward national and global goals

Rationale for the Brief

- Lack of global consensus and consolidated guidance on standard indicators for tracking progress toward meeting national and global targets for preventing and managing MiP
- With the release by WHO of revised global policies for control of MiP in 2013, previous global MiP M&E guidelines were not up to date
- Better monitoring and control of MiP is critical for accelerating progress towards both global malaria and maternal and newborn health goals

Development of the Brief

- USAID's Maternal and Child Survival Program (MCSP) and Jhpiego led a consultative development process with key stakeholder groups, including the U.S. President's Malaria Initiative (PMI), the Roll Back Malaria (RBM) MiP working group, the RBM Monitoring and Evaluation Reference Group and the WHO
- We reviewed and built upon existing global malaria M&E guidance documents that included MiP
- We identified a core set of recommended routine indicators that would be useful for both programmatic decision-making at sub-national and national levels and global monitoring

Acknowledgments



Thank You

Photo Credit: Jhpiego/Allan Gichigi





Global Relevance and MiP Indicators

Lia Florey, USAID/PMI

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Relevance of MiP data for global level

1. WHO's Global Technical Strategy
2. Assessing progress towards global objectives
 - World Malaria Report 2020

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Pillars of WHO's Global Technical Strategy (GTS)

Maximize impact of today's life-saving tools

- **Pillar 1.** Ensure universal access to malaria prevention, diagnosis and treatment
- **Pillar 2.** Accelerate efforts towards elimination and attainment of malaria-free status
- **Pillar 3.** Transform malaria surveillance into a core intervention

WHO Global Technical Strategy for Malaria 2016-2030

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PILLAR 1. ENSURE UNIVERSAL ACCESS TO MALARIA PREVENTION, DIAGNOSIS AND TREATMENT

- Vector Control
 - ITN access and ITN use by pregnant women
- Chemoprevention
 - Especially for the most vulnerable groups including pregnant women (IPTp)
- Universal diagnostic testing of all suspected malaria cases
 - Including pregnant women

WHO Global Technical Strategy for Malaria 2016-2030

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PILLAR 3. TRANSFORM MALARIA SURVEILLANCE INTO A CORE INTERVENTION

Strong malaria surveillance enables NMCPs to:

- advocate for investments commensurate with the malaria disease burden
- target resources to populations most in need to achieve the greatest possible public health impact;
- assess progress and facilitate adjustments to programming;
- permit analyses of value for money;
- evaluate programme objectives and empower the design of efficient and effective programmes

WHO Global Technical Strategy for Malaria 2016-2030

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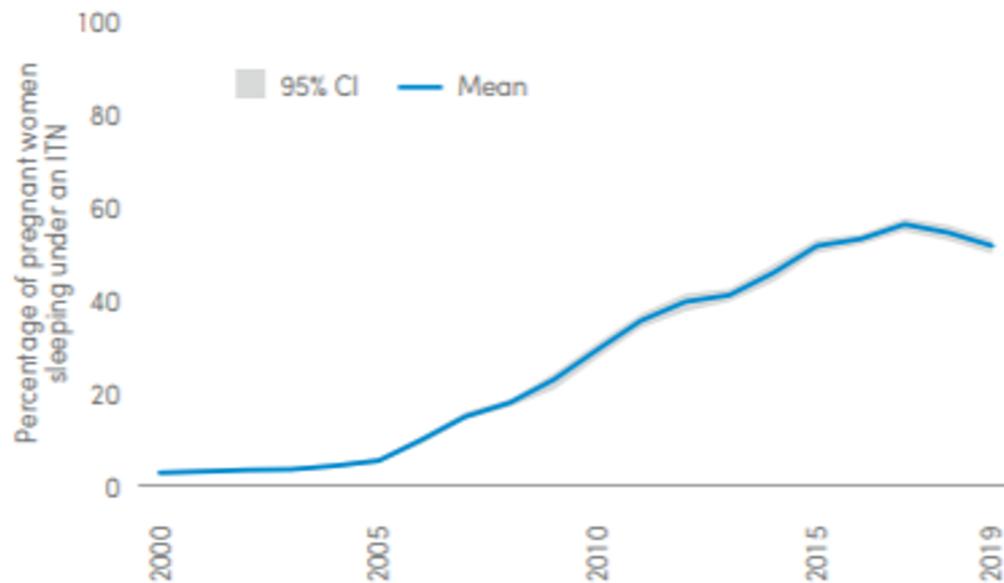
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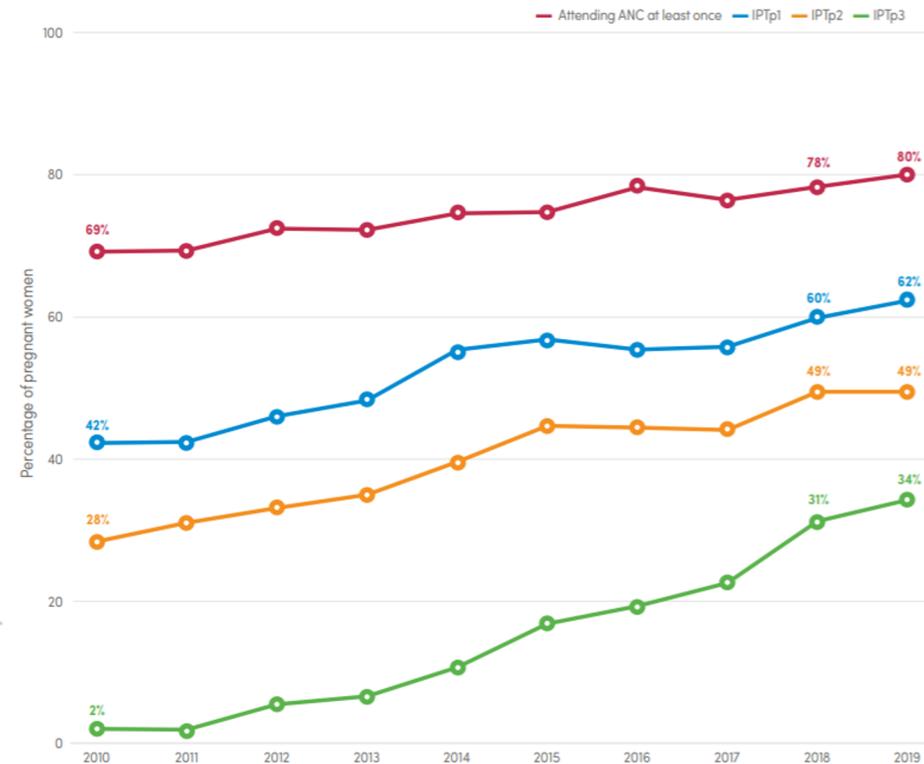


MiP data from the 2020 WMR



2020 World Malaria Report:
<https://www.who.int/publications/i/item/9789240015791>

Percentage of pregnant women attending an ANC clinic at least once and receiving IPTp, by dose sub-Saharan Africa, 2010–2019 Source: NMP reports, US CDC and Prevention estimates and WHO estimates.



ANC: antenatal care; CDC: Centers for Disease Control and Prevention; IPTp: intermittent preventive treatment in pregnancy; IPTp1: first dose of IPTp; IPTp2: second dose of IPTp; IPTp3: third dose of IPTp; NMP: national malaria programme; US: United States; WHO: World Health Organization.

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Understanding different data sources

WMR

Modelled coverage

Denominator for IPTp & ANC coverage = Total number of pregnant women **eligible** for IPTp, calculated by adding total live births from UN population data + spontaneous pregnancy loss after 1st trimester



80% ANC attendance (2019)

DHS/ MIS

Denominator for IPTp & ANC coverage = Total number of surveyed women **with a live birth** in the past 3 or 5 years (Excludes women with pregnancy loss who may be less likely to attend ANC/ take IPTp)



91% ANC attendance (average over last decade)

HMIS

Denominator for IPTp & ANC coverage = EITHER estimated number of pregnant women in facility catchment area OR pregnant women presenting for ANC1

Credit: Julie Gutman, CDC

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Standard MiP Indicators

Recommended Core Routine MiP Indicators

- Percentage of pregnant women attending one or more antenatal care (ANC) visits
- Percentage of pregnant women attending four or more ANC visits
- Percentage of women attending eight or more ANC visits
- Percentage of pregnant women attending ANC in the first trimester
- Percentage of pregnant women attending ANC who received (one/two/three) doses of intermittent preventive treatment in pregnancy (IPTp1, IPTp2, IPTp3, IPTp4)
- Percentage of pregnant women attending ANC who received an insecticide-treated net during ANC
- Percentage of pregnant women with suspected malaria tested for malaria who tested positive
- Percentage of pregnant women with suspected malaria who tested positive for malaria who were treated

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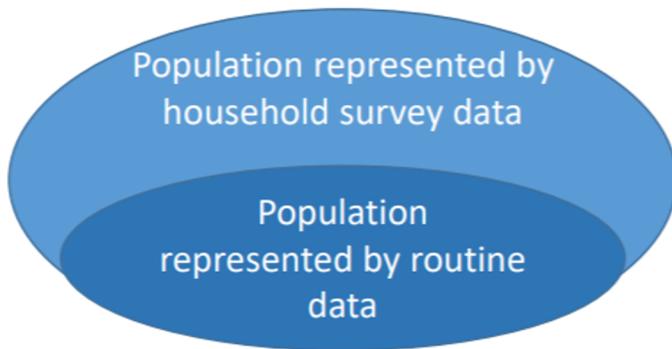
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Evolution of MiP Indicators

Past reliance on national household survey data to track MiP indicators

Advantages and challenges to using routine health information systems



Feasibility of Tracking Recommended Core Routine MiP Indicators versus Additional Routine and Periodic Indicators

- The recommended core routine MiP indicators are already widely collected across countries and can be analyzed and used for decision-making on a regular basis. They can be easily integrated into HMISs if not already present.
- The recommend additional routine and periodic MiP indicators consist of a mix of indicators to be collected through national HMISs and household surveys (e.g., Demographic and Health Survey and Malaria Indicator Survey) and are generally more difficult to collect than the core MiP indicators. Further, as survey data are only collected every few years, they are not positioned to drive ongoing program management decisions.

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The RBM Partnership to End Malaria - Malaria in Pregnancy (MiP) M&E Brief Webinar

MiP M&E Brief: Country-level Practical Application

Lolade Oseni
Malaria M&E Lead, Jhpiego

January 21, 2021

Johns Hopkins University Affiliate



Recap of rationale for development of the MiP M&E brief

Particularly, at country level to:

- › Provide guidance on tracking progress toward national and global targets for preventing and managing MiP.
- › Encourage uniform recording of MiP data to minimize variability across countries.
- › ***Serve as a guide for improving quality and use of routine MiP indicators***

Monitoring and Evaluation of Malaria in Pregnancy Services Practical Tips and Recommended Indicators

November 2020

www.endmalaria.org; www.mcsprogram.org

The purpose of the brief is to provide malaria-endemic countries, particularly country-level government and private-sector stakeholders and policymakers, with guidance on monitoring and evaluation (M&E) of malaria in pregnancy (MiP) services, including recommendations on standard indicators for tracking progress toward meeting national and global targets for preventing and managing MiP. The focus is primarily on routine indicators captured through national health management information systems (HMISs) and used for monitoring within countries at all levels of the health system. The brief is intended to consolidate existing MiP M&E guidance from the World Health Organization (WHO), complementing the new WHO guidance for malaria program managers, the 2018 malaria surveillance guidelines, and the WHO MiP M&E guidelines from 2007.^{1,2,3} The content of the brief further aligns with the *Global Technical Strategy for Malaria 2016–2030* and *A Framework for Malaria Elimination*.^{4,5} Key core recommended routine MiP indicators for ongoing tracking at facility level and reporting to the district and higher levels are presented in the box at right.

Recommended Core Routine MiP Indicators

- Percentage of pregnant women attending one or more antenatal care (ANC) visits
- Percentage of pregnant women attending four or more ANC visits
- Percentage of women attending eight or more ANC visits
- Percentage of pregnant women attending ANC in the first trimester
- Percentage of pregnant women attending ANC who received (one/two/three) doses of intermittent preventive treatment in pregnancy (IPTp1, IPTp2, IPTp3, IPTp4)
- Percentage of pregnant women attending ANC who received an insecticide-treated net during ANC
- Percentage of pregnant women with suspected malaria tested for malaria who tested positive
- Percentage of pregnant women with suspected malaria who tested positive for malaria who were treated

Usefulness at Country Level

MiP Indicator Reference Guide

- Detailed matrix of recommended core indicators and additional routine and periodic MiP indicators – including operational definition, data source, frequency of collection, and important notes.
- The focus is primarily on routine indicators captured through HMIS and used for monitoring

MiP M&E Framework

- *within countries at all levels of health system.*
- Customized to show select routine and periodic MiP indicators along the impact pathway

Data Visualization and Interpretation

- Recommended data visualizations for MiP indicators.
- Data interpretation and use to inform decisions when actions are needed by facility/district staff to improve quality of care.

Consolidates all previous MiP M&E guidance in one doc

- WHO guidance for malaria program managers
- 2018 malaria SME guidelines;
- WHO MiP M&E guidelines from 2007

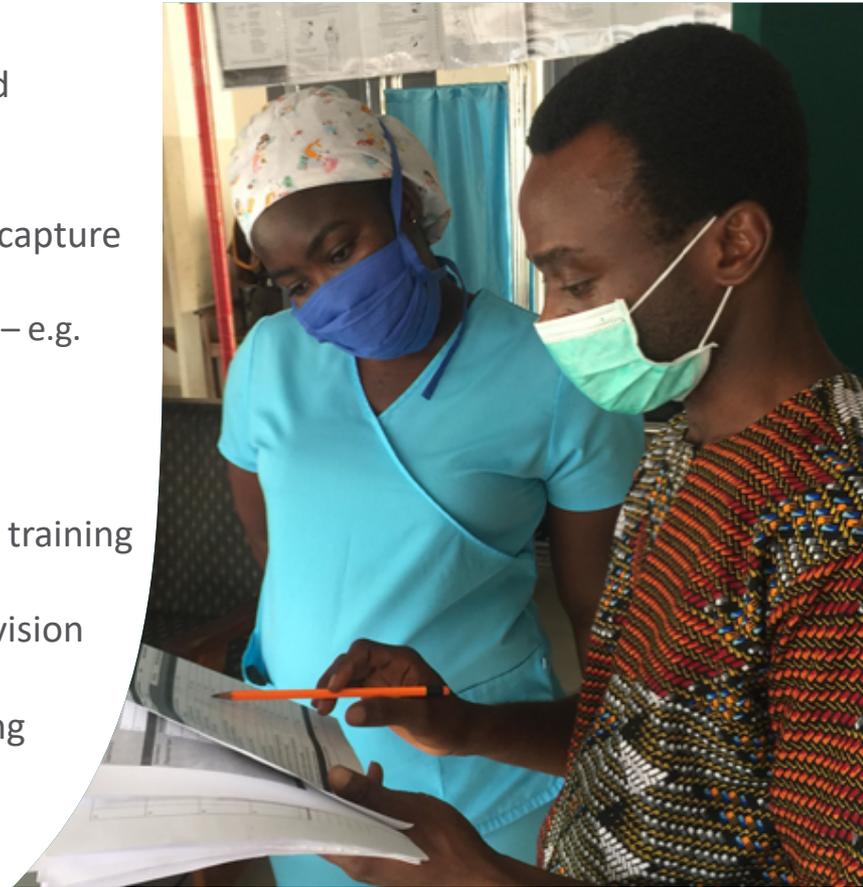
Introduction of the MiP Brief at Country Level – how to foster uptake

National level:

- Awareness and discussion at level of NMCP leadership and Reproductive Health Directorate leadership
- Presentation to MiP and SME TWGs
- Engage HMIS department to ensure tools are modified to capture the full set of core indicators
 - » update to HMIS forms, registers to capture newer indicators – e.g. 8 ANC contacts, IPTp 3, 4, MiP case management

District and Facilities:

- Orientation on core MiP indicators, e.g. addendum to MiP training package
- Reference the brief during MiP onsite trainings and supervision visits to facilities
- Develop job aids for the re-orientation of particular training modules



Challenges & best practices associated with application and use of MiP indicators

Measuring Quality of Care Progress for Malaria Case Management and MiP

County: _____ Facility Name: _____ Year: _____

Suspected malaria cases tested

Calculation:

$$\frac{\text{\# persons tested for malaria with RDT or microscopy}}{\text{\# suspected malaria cases}} \times 100$$

suspected _____
tested _____

Essential Commodity Stock Situation (X = out of stock 1 or more days in the month)				
Year:	Malaria RDT	ACT	SP	ITN
Jan				
Feb				
Mar				
Apr				
May				
Jun				
Jul				
Aug				
Sep				
Oct				
Nov				
Dec				

Key questions to consider when reviewing each indicator on each graph:
 1. Is the performance of the indicator the same across the months or does it change? If it is changing, why is it changing?
 2. Is the performance of the indicator changing in similar or opposite ways compared to a related indicator or indicators?
 3. Do trends in the indicator suggest care is improving, getting worse, or staying the same?

Confirmed malaria cases treated with ACT

Calculation:

$$\frac{\text{\# persons treated with ACT}}{\text{\# persons tested positive for malaria by RDT or microscopy}} \times 100$$

treated ACT _____
positive tests _____

Action Items			
Month/Yr	Action	Person responsible	Due Date

Pregnant women who received 3rd dose of IPTp

Calculation:

$$\frac{\text{\# IPTp3 Doses administered in the month}}{\text{\# ANC 1 Clients}} \times 100$$

IPTp3 Doses _____
ANC 1 Clients _____

Indicator challenges and best practices (1) – ANC Contacts

Indicator Name	Potential Challenges to Collecting, Using & Reporting	Best Practices for improving indicator use and performance
% of pregnant women attending one or more antenatal care (ANC) visits (ANC 1+)	Health facility data may not be representative of the general population if health care is sought at facilities that do not report into the HMIS, e.g. private facilities.	Promote private facilities reporting practices around MiP data, especially if the private sector provides a substantial proportion of the services accessed by pregnant women.
% of pregnant women attending 4 or more ANC visits (ANC 4+)		Useful to triangulate with IPTp3/4 uptake to identify possible missed opportunities Ideally IPTp3 >= ANC4
% of pregnant women attending 8 or more ANC visits (ANC 8+ visits/contacts)	Not tracked by some HMIS tools	Revise HMIS reporting form to include ANC 8 field

Indicator challenges and best practices(2) – ANC Contact cont'd

Indicator Name	Potential Challenges to Collecting, Using & Reporting	Best Practices for improving indicator use and performance
<p>% of pregnant women who have first ANC contact in the 1st trimester (less than 12 weeks) (ANC initiation in 1st trimester)</p>	<p>Cut-off gestational age for early initiation varies across countries HMIS tools – 12 weeks, 16 weeks, 20 weeks</p>	<p>Revise HMIS reporting forms to capture 12 weeks Need for harmonization for accurate reporting.</p> <p>Triangulate with IPTp uptake</p> <p>Compare with ITN uptake to estimate duration of protection during pregnancy</p>

Indicator challenges and best practices (3) – MiP Prevention

Indicator Name	Potential Challenges to Collecting, Using & Reporting	Best Practices for improving indicator use and performance
% of pregnant women who received an insecticide-treated net (ITN) during ANC	<ul style="list-style-type: none"> - Sometimes value is > 100% when ITN given in subsequent ANC visits - ITN uptake does not reflect use 	Review during MiP supervision visit and DQA/data validation visit
<p>% of pregnant women attending ANC who received (one/two/three/four) doses of intermittent preventive treatment in pregnancy</p> <p>(IPTp1, IPTp2, IPTp3, IPTp4)</p>	<ul style="list-style-type: none"> - Some ANC registers and reporting forms don't capture IPTp3 or 4 - IPTp3 or IPTp4 > IPTp2 - IPTp2, 3, 4 > 100% in some months - Assumes direct observation is enforced at the ANC 	<ul style="list-style-type: none"> - Update HMIS tools to capture IPTp3, IPTp4 - Record each IPTp dose (1, 2, 3, 4) in a separate column in ANC register; extra column can be drawn to capture IPTp4 (if not already provided) -If HMIS summary form is designed to only capture 3 doses - only summarize IPTp1, IPTp2 and IPTp3 -Do not add up 3, 4, 5 as 3+ - To avoid >100% - quarterly analyses increase the chances of numerator to be a part of the denominator

Indicator challenges and best practices (4) – Case Management

Indicator Name	Potential Challenges to Collecting, Using & Reporting	Best Practices for improving indicator use and performance
<p>% of pregnant women with suspected malaria tested for malaria who tested positive</p> <p>(Test positivity rate)</p>	<p>Not routinely tracked at ANC as pregnant women visit OPD when sick</p> <p>Some OPD registers don't disaggregate by pregnancy status</p>	<p>Inclusion of MiP case management indicators/data in routine analysis and visualization at all levels</p> <ul style="list-style-type: none"> - Update HMIS tools to disaggregate malaria testing and treatment data by pregnancy; - Lessons could be learnt from countries implementing ANC surveillance
<p>% of pregnant women with suspected malaria who tested positive for malaria who were treated</p> <p>(Treatment of MiP)</p>		

Practical Tips for M&E of MiP Programs and Services (1)

Indicator Definitions, Disaggregation, and Calculation

- Denominator for calculating IPTp data is different for longitudinal and cross-sectional ANC registers.
 - › For cross-sectional registers, ANC 1 is used as a proxy for eligible pregnant women. Measures quality of services at ANC (operational coverage).
 - › 2018 WHO malaria SME manual recommends “number of expected pregnancies”. Included in the brief as a recommended additional denominator for population-based coverage.
- OPD registers need to disaggregate confirmed and treated malaria cases by pregnancy status
 - › to help understand disease burden and management practices among pregnant women, and
 - › to monitor quality of care for MiP

Practical Tips for M&E of MiP Programs and Services (2)

Data Review and Interpretation

- A schedule of meetings should be established at different levels (facility, district, national levels) to review malaria data (including MiP and surveillance data)
 - › To provide insight needed for program managers to direct support, when coverage is below target
 - › Sample dashboard templates included in the brief
- Expect seasonal patterns in the number of cases diagnosed and treated among pregnant women.
- Improved tracking of IPTp and testing and treatment of malaria in pregnant women can help with forecasting of MiP commodities
- Remember, IPTp coverage estimates derived from routine data may not approximate coverage estimates derived from household surveys due to differences in denominators (women attending ANC vs all women) and should not be directly compared.

Practical Tips for M&E of MiP Programs and Services (3)

Data Quality and Completeness Considerations

- IPTp4 < IPTp3 < IPTp2 < IPTp1 when examined on a quarterly or longer period of time.
- In areas of high HIV prevalence, expect lower IPTp coverage as co-trimoxazole prophylaxis is a contraindication for IPTp-SP
- Ideally IPTp3 >= ANC4, if there are no missed opportunities
- Interrogate ITN uptake if >100%
- Reporting from private facilities need to be encouraged if the private sector provides a substantial proportion of the services accessed by pregnant women.

THANK YOU!

