

Indicators for M&E of malaria in pregnancy services



Beatriz Galatas and Abdisalan M Noor
Strategic Information for Response

Global **Malaria** Programme



**World Health
Organization**

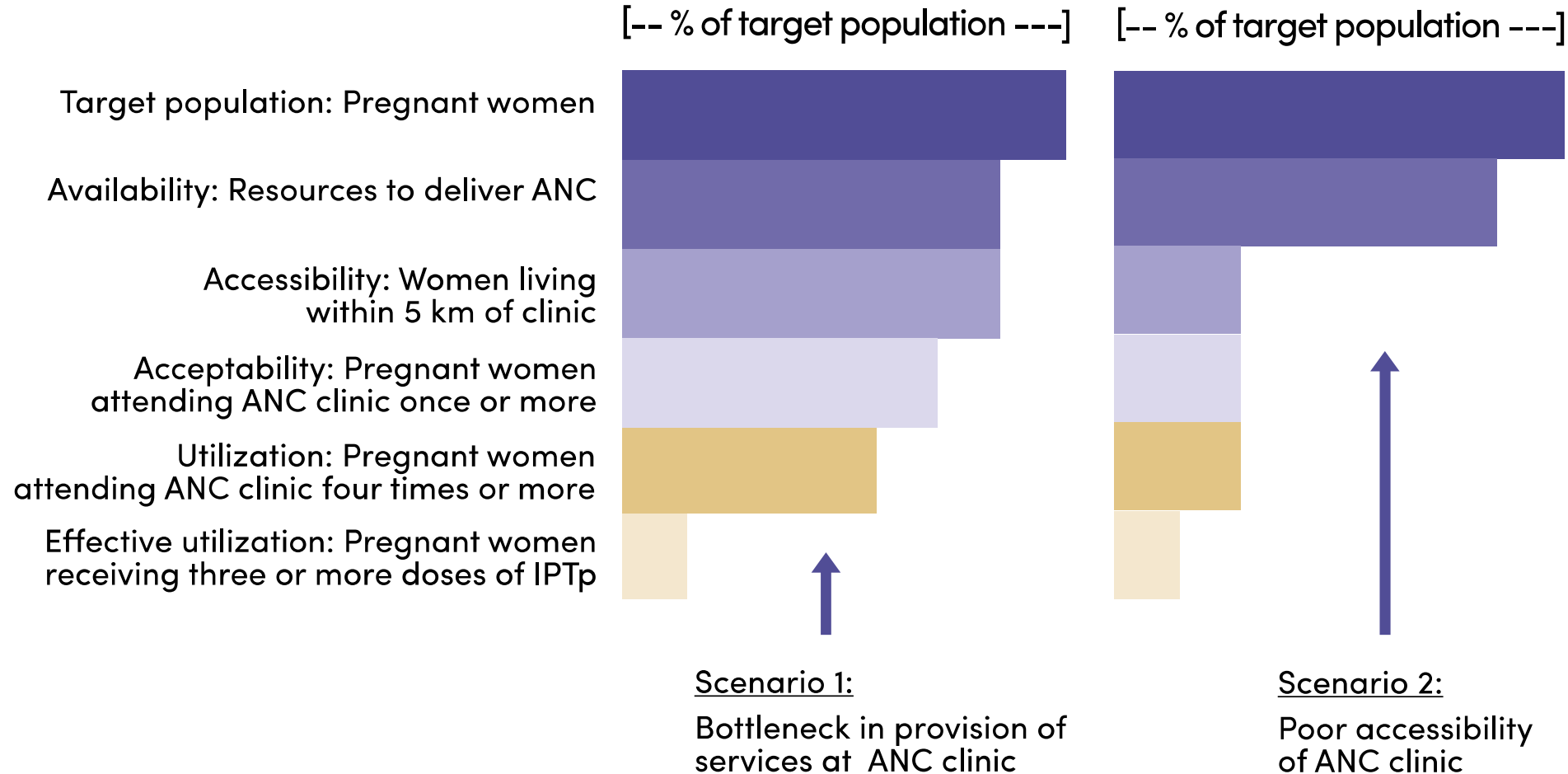


No	Indicator name	Numerator	Denominator
OUTCOME INDICATORS			
3.1	Proportion of pregnant women who received three or more doses of IPTp	Number of pregnant women who received three or more doses of IPTp	Number of expected pregnancies
3.2	Proportion of pregnant women who received two doses of IPTp	Number 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



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

Bottlenecks affecting MiP indicators



Indicators of ANC service coverage and use/delivery



Menu of Recommended Core Routine Malaria in Pregnancy Indicators for Collection by Country Programs

	Intervention/Topic	Indicator*	Definition (N = numerator; D = denominator)	Data Source	Notes and References
Indicators to be Measured through Routine Data Collection Mechanisms (HMIS, Supervision Visits, Human Resource Information Systems, etc.)					
Health Facility Service Contact					
	Any antenatal care attendance (ANC I+)	Percentage pregnant women attending 1 or more ANC visit	N: Number of pregnant women attending ≥ 1 ANC visit multiplied by 100 D: Estimated number of pregnant women in facility catchment area population	Monthly ANC register or monthly facility summary form	Routinely-collected health facility data may not be representative of the general population if health care is sought at facilities that do not report into the health management information system (HMIS). Number of first ANC visits can also be used for a health facility-based denominator (see WHO's draft Analysis and Use of Health Facility Data: Guidance for RMNCAH programme managers)
	ANC 4+ attendance	Percentage pregnant women attending 4 or more ANC visits	N: Number of pregnant women attending ≥ 4 ANC visits multiplied by 100 D: Estimated number of pregnant women in facility catchment area population	Monthly ANC register or monthly facility summary form	Routinely-collected 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. Number of first ANC visits can also be used for a health facility-based denominator.
	ANC 8+ attendance	Percentage pregnant women attending 8 or more ANC visits	N: Number of pregnant women attending ≥ 8 ANC visits multiplied by 100 D: Estimated number of pregnant women in facility catchment area population	Monthly ANC register or monthly facility summary form	Routinely-collected 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. This is a relatively new recommendation by WHO so some HMIS may not yet track this. Number of first ANC visits can also be used for a health facility-based denominator.

Numerator not representative due to care-seeking, recording and reporting challenges

Denominator is uncertain as it is difficult to define health facility catchments and estimate expected pregnancies

The use of 1st ANC visits as a denominator provides service usage, not population-level coverage

Indicators of ANC service coverage and use/delivery



	Intervention/Topic	Indicator*	Definition (N = numerator; D = denominator)	Data Source	Notes and References
Indicators to be Measured through Routine Data Collection Mechanisms (HMIS, Supervision Visits, Human Resource Information Systems, etc.)					
4.	ANC attendance in first trimester	Percentage of pregnant women who have first antenatal care contact in the first trimester (less than 12 weeks)	N: Number of pregnant women who have first ANC contact during first trimester (less than 12 weeks) multiplied by 100 D: Total number of pregnant women who have first ANC contact	Monthly ANC register or monthly facility summary form	Routinely-collected 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. Included and as a core facility indicator in WHO's draft Analysis and Use of Health Facility Data: Guidance for RMNCAH programme managers.

Numerator not representative due to recording and reporting challenges

Not easy at lower-level facilities to ascertain if a pregnant woman is in the first trimester

Good signal for how early women seek ANC care and the window of opportunity for IPTp

Indicators of IPTp service use/delivery



Intervention/Topic	Indicator*	Definition (N = numerator; D = denominator)	Data Source	Notes and References
Indicators to be Measured through Routine Data Collection Mechanisms (HMIS, Supervision Visits, Human Resource Information Systems, etc.)				
MIP Prevention Interventions				
Intermittent preventive treatment for malaria –IPTp1	Percentage of pregnant women attending ANC who received one dose of intermittent preventive treatment in pregnancy (IPTp1)	<p>N: Number of pregnant women attending ANC who received one dose of intermittent preventive treatment in pregnancy (IPTp1) multiplied by 100</p> <p>D: Total number of first-visit ANC clients</p>	<p>ANC register</p> <p>Monthly facility summary form</p>	<p>First ANC visit approximates the number of eligible clients that should receive each dose of IPTp: IPTp1, IPTp2, IPTp3. This is a facility-based denominator, rather than a population-based denominator (such as estimated number of women in the facility catchment area, which some countries are using) and lets providers/managers understand the quality of care they are providing in their facility/district. Assumes that direct observation is enforced at the ANC, but is not recorded/tracked.</p> <p>Included as a context-specific indicator in draft WHO Monitoring Framework for ANC and as a core facility indicator in WHO's draft Analysis and Use of Health Facility Data: Guidance for RMNCAH programme managers, Working document, March 2019. Included in WHO's MIP: Guidelines for Measuring Key Monitoring and Evaluation Indicators, 2007.</p>

Numerator not representative due to recording and reporting challenges

Denominator measures service use / delivery

Population-level coverage would require number of expected number of pregnant women. This can be uncertain as it is difficult to define health facility catchments and estimate expected pregnancies

To understand effective delivery, one needs to match dose received with trimester

To use this information for impact analysis, information on gravidity is needed

Indicators of IPTp service use/delivery



Intervention/Topic	Indicator*	Definition (N = numerator; D = denominator)	Data Source	Notes and References
Indicators to be Measured through Routine Data Collection Mechanisms (HMIS, Supervision Visits, Human Resource Information Systems, etc.)				
Intermittent preventive treatment for malaria- IPTp4	Percentage of pregnant women attending ANC who received four doses of intermittent preventive treatment in pregnancy (IPTp4)	<p>N: Number of pregnant women attending ANC who received intermittent preventive treatment in pregnancy (IPTp4) multiplied by 100</p> <p>D: Total number of first-visit ANC clients</p>	<p>ANC register</p> <p>Monthly facility summary report</p>	<p>First ANC visit approximates the number of eligible clients that should receive each dose of IPTp. This is a facility-based denominator, rather than a population-based denominator (such as estimated number of women in the facility catchment area) and lets providers/managers understand the quality of care they are providing in their facility/district. Assumes that direct observation is enforced at the ANC, but is not recorded/tracked</p> <p>Measuring IPTp4+ coverage from routine data requires that ANC registers include columns for more than three doses of IPTp.</p>

IPTp4+ is for or more doses

Numerator not representative due to recording and reporting challenges

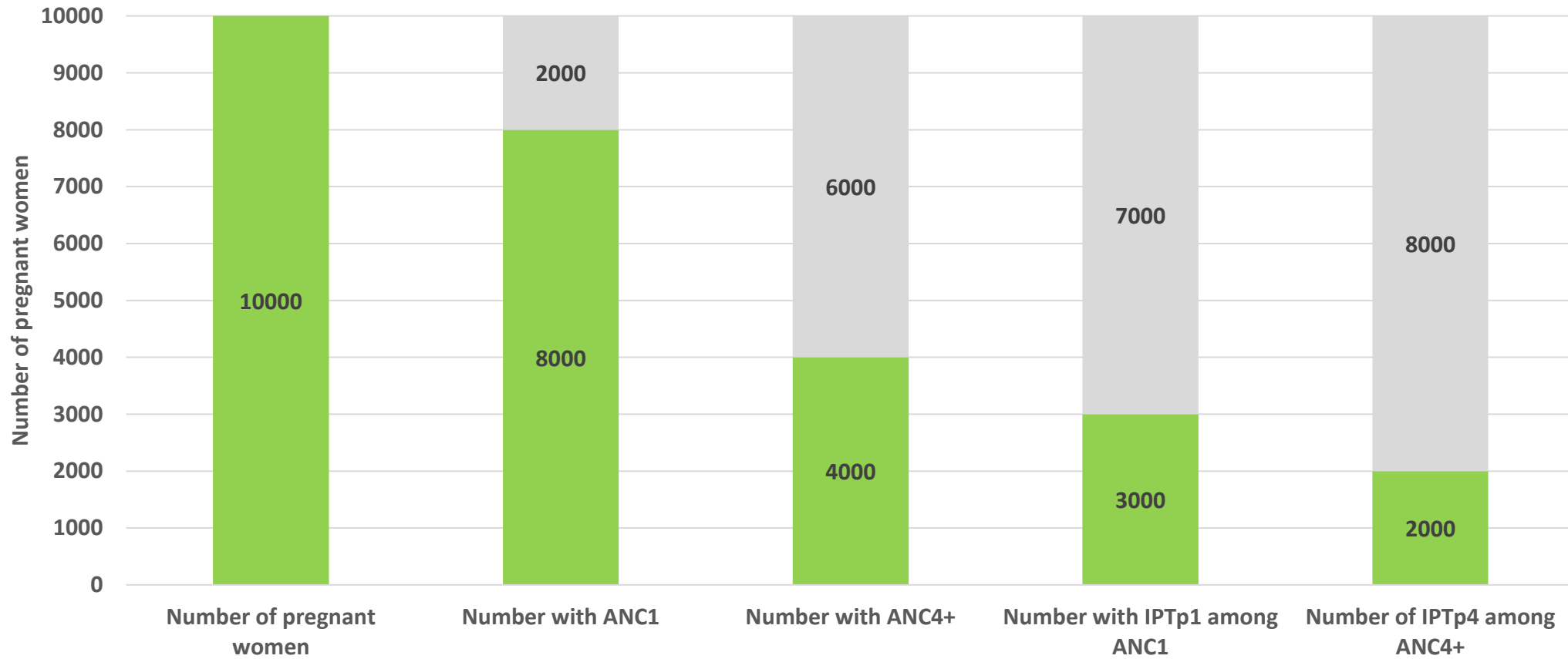
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Differences between IPTp service use and coverage indicators



Service use/delivery

80%

40%

37.5%

25%

Population level coverage

80%

40%

30%

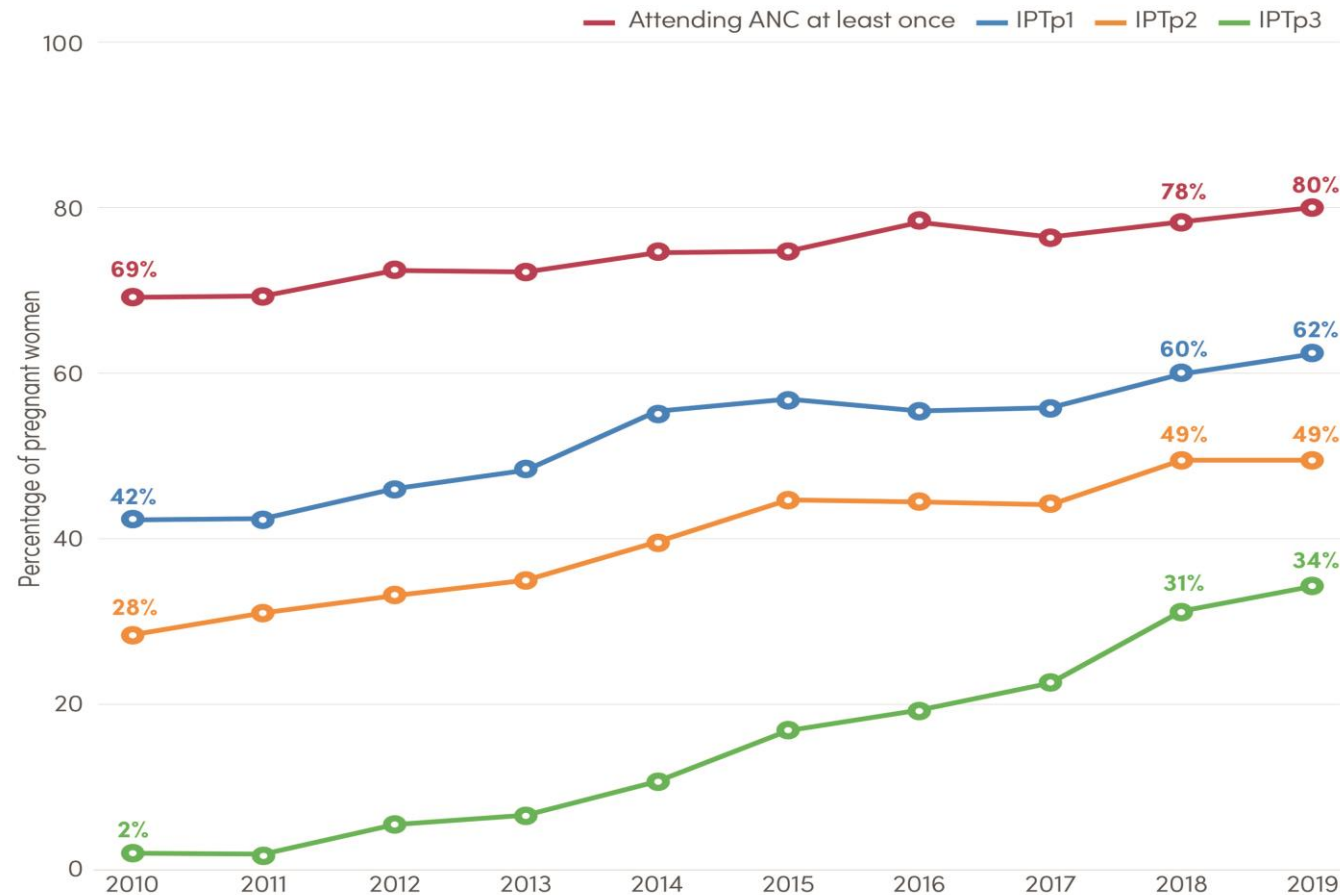
20%

Indicators of IPTp service coverage – methodological fixes



FIG. 7.6.

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.

By country total pregnancies resulting in livebirths are calculated

A function that accounts for spontaneous pregnancy loss (miscarriages, stillbirths) is used in this process

Country reported number of ANC visits by pregnant women and the number of women receiving IPTp by dose are used as numerator. A reporting adjustment may be applied.

Household survey data used to fill gaps



- The estimation of MiP indicators is challenging
- Routinely collected data is useful, but does not provide all the information required to have a full understanding of MiP intervention coverage and usage
- Some methodological fixes can be applied to solve for some of the limitations associated with measuring intervention coverage and use indicators
- Population-level coverage and service use /delivery indicators should be clearly differentiated. They should be measured and interpreted differently by malaria-endemic countries, and should be used differently for decision-making.