Indicator Sheet

ANTENATAL CARE (at least four visits)/ ANTENATAL (4th visit)

CONCEPT AND DEFINITION

Concept

Antenatal care (ANC) is a critical component for improving maternal and newborn health and provides a platform for important health-care functions, including: health promotion, screening and diagnosis, injury and disease prevention, as well as birth preparedness and preparation for the postnatal period. By implementing timely and appropriate evidence-based practices, ANC can reduce morbidity and mortality and optimize overall health and well-being. ANC also provides the opportunity to communicate with and support women, families and communities at a critical time in the course of a woman's life. ANC comprises effective communication about physiological, biomedical, behavioural, sociocultural issues, as well as emotional and psychological support, to pregnant women in a respectful way *(1–3)*.

Definition

The number of women of reproductive age with a live birth in a specified reference period who received ANC four or more times from any provider is expressed as a percentage of women in the same age range with a live birth in the same period.

Unit of measurement: Percentage (%)

Level of indicator use: Global, national, and subnational (first or second administrative level)

Monitoring and evaluation framework: Outcome (service coverage)

MEASUREMENT GUIDANCE

Data sources

There are two common data sources for this indicator:

1. Routinely collected administrative data
2. Population-based household surveys.

Routinely collected administrative data

Data from routinely collected and compiled administrative data sources will provide information as recorded in medical charts/records or registers and are entered into national and/or subnational health information systems:

- Health information management system (HMIS) and/or
- District Health Information Management System (DHIS2).

Routinely collected administrative data and health facility statistics are the preferred data source in settings with a high utilization of health facility services and data are recorded in a manner that ensures good data quality for both the public and private health sectors.

Key source of data: Administrative data sources include health facility and health services data abstracted from obstetric and neonatal medical records. Relevant information is recorded about the number and timing of ANC visits among all women who attended ANC during pregnancy within health facilities on paper forms completed by health personnel and/or through an electronic medical record. Data from paper or electronic sources are entered or abstracted into a database or registry and are compiled and analysed within the national and/or subnational HMIS. The Ministry of Health (MoH) and/or National Statistical Offices (NSO) are usually responsible for the reporting of this indicator.

Indicator definition and calculation: The indicator is calculated as the percentage of women who received ANC four or more times by any provider among women with an ANC visit in a health facility during a specified reference period.

Numerator: Number of antenatal clients with a fourth ANC visit in a specified time period.

Denominator: Number of antenatal clients with a first ANC visit in a specified time period.

Unless specified, the statistic may include any woman regardless of age and includes both live births and stillbirths, as defined by the health facility and/or national or subnational vital statistics offices.

The numerator and denominator definition of ANC is based on individual health facility report or is in accordance with the country-specific definition by the MoH and/or NSO.

Frequency of measurement: The indicator can be calculated on an annual basis or may be tracked on a more frequent and ongoing basis (e.g. monthly, quarterly), depending on facility, subnational and national processes for data entry, compilation and analysis. As a guide, the recommended frequency of measurement based on reporting level is outlined below:

- *Facility level:* Monthly, quarterly, or as needed based on the country and/or facility need
- *Subnational (first and second administrative) level:* Monthly or quarterly
- *National level:* Annually (data can be aggregated to provide national-level data).

Disaggregation: By level of facility, location of facility (e.g. urban, rural), type of health personnel, and timing of ANC visit.

Missing values: Missing values are usually not known, or not reported.

Population-based household surveys

The main source of data for this indicator has been through population-based household surveys collected through nationally or subnationally representative and statistically sound questionnaires, such as:

- Demographic Health Surveys (DHS) *(4)*
- Multiple Indicator Cluster Surveys (MICS) *(5)*
- Reproductive Health Surveys (RHS)
- Other household surveys with a similar methodological design.

Population-based household survey data are the preferred data source in settings with a low utilization of health facility services, or where private health sector data are excluded from routinely collected administrative data sources.

Key source of data: Eligible women of reproductive age (15–49 years) are identified in the household survey for inclusion and interviewed using an individual women's questionnaire. Women are considered eligible for survey interview if they are either usual residents or visitors of the household who stayed there the night before the interview.

All eligible and interviewed women between 15 and 49 years of age who had a live birth during a specified reference period, typically 2–5 years prior to the time of interview, are asked *"Did you see anyone for*

antenatal care for this pregnancy?", in reference to the last live birth the individual woman had during the same reference period. If women saw anyone for ANC, they are then asked to identify *"How many times did you receive antenatal care during this pregnancy?"*

MoH and NSO typically conduct household surveys and compile, analyse and report the results for this indicator in collaboration with the survey programme (e.g. DHS, MICS, RHS) and funding agency.

Indicator definition and calculation: Individual women of reproductive age (15–49 years old) are asked about ANC visits for their most recent live birth. Questions about ANC visits are asked, irrespective of the child's current living status (dead or alive), and are for live births that they have had during a specified reference period, which is typically 2–5 years before the time of the survey completion. The definition is as follows:

The percentage of interviewed women (aged 15 to 49 years) with a live birth in the 2–5 years prior to survey completion who received ANC four or more times from any provider. The indicator consists of the following numerator and denominator:

Numerator: Number of women (aged 15–49 years) with a live birth who received ANC four or more times from any provider.

Denominator: Total number of women (aged 15–49 years) with a live birth.

Frequency of measurement: Household surveys are typically conducted every 3–5 years.

Disaggregation at population level: Type of health personnel, place of delivery, mode of delivery, place of residence (e.g. urban, rural), sex of live birth, birth order, socioeconomic status (e.g. education level, wealth quintile), age of woman at the time of delivery, and births attended by skilled health personnel.

Missing values: Included in the distribution as "don't know" and/or "missing".

INTERPRETATION AND USE

Interpretation

This indicator helps programme management at global, national and subnational levels by monitoring and evaluating perinatal outcomes and using data to make informed decisions about the planning, development and evaluation of health services delivery and initiatives. The antenatal period presents opportunities for reaching pregnant women with interventions that may be vital to both maternal, fetal and newborn health and well-being. The World Health Organization (WHO) previously recommended that pregnant women complete at least four ANC visits. However, new guidelines from the WHO ANC Model (2018) increase the recommended number of contacts a pregnant woman has with health providers throughout her pregnancy from four to eight visits, and future programmes should consider measuring based on these guidelines *(1)*.

This indicator should be interpreted with caution as it is a measure of contact with the health system and does not take account the content and quality of care received. Receiving ANC during pregnancy does not guarantee the receipt of evidenced-based interventions that are effective in improving maternal and newborn health and survival. It should not be assumed that women received ANC in accordance with WHO, other international organizations, and/or country-specific recommendations or guidelines. Therefore, this indicator should be complemented with information on the content and quality of interventions received during each ANC contact in order to more effectively monitor and evaluate the effectiveness and impact of maternal and newborn health interventions.

Common challenges

Data collected from administrative and other routine data systems

Administrative data may suffer from poor quality such as irregularities in report generation, data duplication and inconsistencies *(6)*. Reporting challenges exist at the facility level given data quality issues, including; incomplete, inaccurate and lack of timely data due to insufficient capacity in the health system or inadequate system design.

Many HMIS databases or registries are event-based and only include ANC information for women who delivered a birth at a health facility. In some instances, the denominator may include births delivered by women of an unspecified age range and include both live births and stillbirths. In addition, the definition of a stillbirth varies by country and context, such as differences in inclusion for gestational age (e.g. 20–28 weeks) and birthweight (e.g. ⩾ 500 grams). As this often only represents those women who present to health facilities for ANC, it does not capture the number of pregnancies and demand for ANC within the total population. These differences in definitions compromise the ability to compare data between countries.

Administrative data should be interpreted with caution in settings where data quality is poor and the percentage of births at public and

private sector health facilities is low, or where data from the private health sector are not compiled within the HMIS reporting.

In settings where routine HMIS data lack information on pregnancies and/or births that occur outside the public sector – for example, in homes or private sector facilities – the total number of births in the HMIS should not serve to estimate the denominator for this indicator. Where data on the total numbers of live births for the entire population for the denominator are unavailable, evaluators can calculate total estimated live births using census data for the total population and crude birth rates in a specified area (total expected live births = estimated population x the total crude birth rate).

Data collected through household surveys

Women may not be able to accurately recall details around childbirth when data are collected through household surveys *(7)*. There is also a time lag as the recall period is from two to five years before the survey data are collected.

The most commonly used denominator is the number of live births, which acts as a proxy for the number of pregnant women. However, inclusion of only live births underestimates the total number of pregnancies by excluding those that end in stillbirth or spontaneous or induced abortion, as well as ectopic and molar pregnancies. It also causes survivor bias in that only those women who are alive at the time of interview would be included and underestimates the total number of women requiring care during pregnancy.

The indicator usually measures visits with any provider because national-level household surveys do not collect provider data for each visit. In addition, standardization of the definition of health personnel is sometimes difficult because of differences in naming conventions, competencies and training of health personnel between and within countries *(8)*.

GLOBAL MONITORING

Global database

The United Nations Children's Fund (UNICEF) and WHO each maintain databases for global monitoring and reporting of the percentage of women who received ANC at least four times during pregnancy by any provider. These agencies obtain data from nationally representative household surveys or routinely collected administrative data/services statistics. Before data can be included in the global databases, UNICEF and WHO undertake a process of data verification that includes correspondence with field offices to clarify any questions regarding the reported statistics. More information about the global databases for ANC coverage can be found at the following links for UNICEF and WHO: https://data.unicef.org/topic/maternal-health/antenatal-care/ and http://www.who.int/gho/maternal_health/en/.

Key initiatives

Countdown to 2030 – Women's, Children's, and Adolescent's Health: http://countdown2030.org/

Ending Preventable Maternal Mortality (EPMM): http://who.int/reproductivehealth/topics/maternal_perinatal/epmm/en/

Every Newborn Action Plan (ENAP): http://apps.who.int/iris/bitstream/10665/127938/1/9789241507448_eng.pdf

Global Reference List of 100 Core Health Indicators, 2018: https://www.who.int/healthinfo/indicators/2018/en/

Global Strategy for Women's, Children's, and Adolescent's Health (2016-2030): http://www.who.int/life-course/partners/global-strategy/en/

ADDITIONAL RESOURCES

Global Health Observatory (GHO) Data – World Health Statistics: http://www.who.int/gho/publications/world_health_statistics/en/

UNICEF Data: Monitoring the situation of children and women: Antenatal care: https://data.unicef.org/topic/maternal-health/antenatal-care/

UNICEF – Multiple Indicator Cluster Surveys: http://mics.unicef.org/tools

The DHS Program – Demographic and Health Surveys: https://dhsprogram.com

MEASURE Evaluation: Family Planning and Reproductive Health Indicators Database: Percent women attended at least four times for antenatal care during pregnancy: https://www.measureevaluation.org/prh/rh_indicators/womens-health/sm/percent-women-attended-at-least-four-times-for

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