World Health Organization

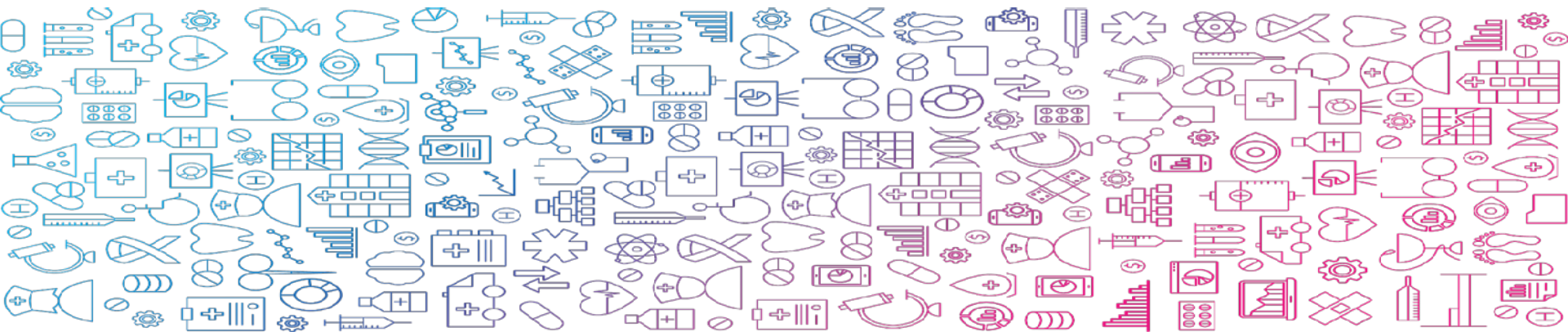**unicef**
for every child

Official launch of

Analysis and use of health facility data: guidance for maternal, newborn, child, and adolescent health programme managers
& accompanying WHO capacity strengthening materials

Wednesday, 8 November 2023
8am New York, 2pm Geneva, 4pm Nairobi, 6.30pm New Delhi

Agenda

Welcome and introduction: Dr Anshu Banerjee, Director, Department of Maternal, Newborn, Child and Adolescent Health and Ageing, WHO HQ

Overview of the guidance document and capacity strengthening materials: Liz Katwan, Epidemiology, Monitoring and Evaluation Unit, Department of Maternal, Newborn, Child and Adolescent Health and Ageing, WHO

Panel discussion and questions: Facilitated by Dr Theresa Diaz, Unit Head, Epidemiology, Monitoring and Evaluation, Department of Maternal, Newborn, Child and Adolescent Health and Ageing, WHO HQ

- Maria Muñiz, Senior Adviser Statistics & Monitoring (Health, Immunization, MNCAH & HIV), Division of Data, Analytics, Planning and Monitoring, UNICEF
- Dr Benson Droti, Team Lead, Health Information System, WHO Regional Office for Africa
- Dr Khalid Siddeeg, Regional Adviser, Child and Adolescent Health, WHO Regional Office for the Eastern Mediterranean
- Barbara Rawlins, Senior Implementation Research Advisor, Bureau for Global Health, USAID

Closing remarks: Dr Theresa Diaz, WHO
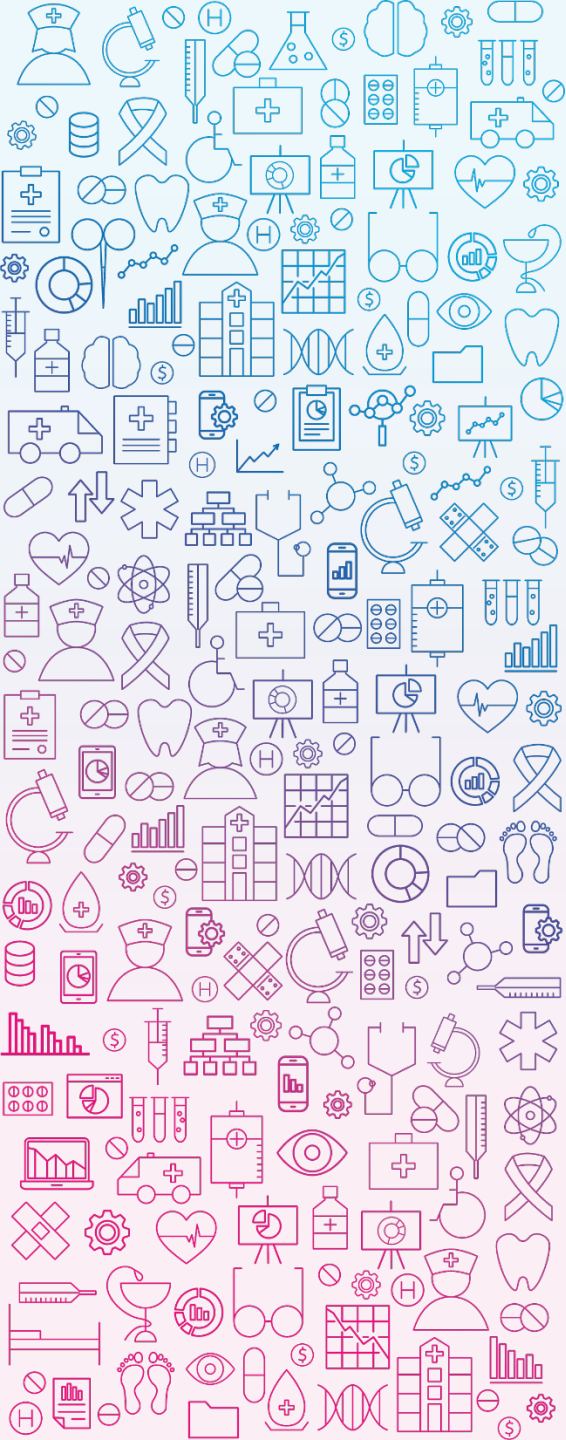
Analysis and use of routine facility data for maternal, newborn, child and adolescent health:
Guidance and capacity strengthening materials for MNCAH programme managers

Liz Katwan
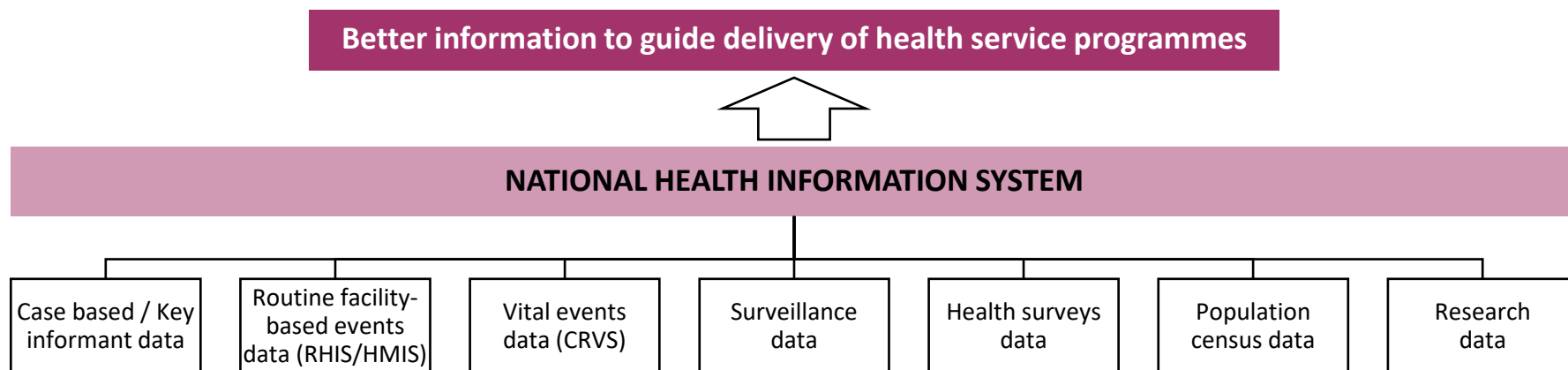WHO Department of Maternal, Newborn, Child and Adolescent Health and Ageing

8 November 2023

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Health data and health information systems

Why are health data needed?

- Health data are critically important for effective monitoring of health situations and trends, developing policies and plans, allocating resources and identifying areas for research at all levels of the health system.

- Country governments and development partners rely heavily on country data to improve the delivery of health services.

- Generation of good quality, timely, comparable and disaggregated data requires robust health information systems.

What do we mean by health information systems?

A **health information system (HIS)** serves to generate "information to enable decision-makers at all levels of the health system to identify problems and needs, make evidence-based decisions on health policy and allocate scarce resources optimally".[1]

Better information to guide delivery of health service programmes

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NATIONAL HEALTH INFORMATION SYSTEM

Case based / Key informant data	Routine facility-based events data (RHIS/HMIS)	Vital events data (CRVS)	Surveillance data	Health surveys data	Population census data	Research data

[1] World Health Organization (2008). *Toolkit on monitoring health systems strengthening. Health information systems.*

Adapted content and image from original slides from:

Spotlight on routine health facility data

Routine health facility data represent services provided/utilized at clinics, hospitals and other health service delivery points at the time that services are provided.

- These data may be entered at the health service delivery (e.g. health facility) point or at subnational level (e.g. district office). The data are summarized and reported to the appropriate administrative authorities.

- The system of regular recording, reporting, analysis and presentation of health facility data is known as the **routine health information system** (RHIS).[1]

Advantages

- Reported at regular, more frequent intervals
  - Can provide data in a timely manner
  - Can be used to monitor trends over time
- High geographic granularity (subnational, facility, geo-referenced, etc. data)
- Customizable configuration enables calculation of indicators to fit use cases (e.g. facility- vs. population-based denominators)

Limitations

- Data often limited to facility-based interventions
  - Can also exclude data from private sector facilities
- Difficult to understand demand-side of health service utilization (knowledge, attitudes, behaviours, etc.)
- Quality concerns (under/over counting/reporting, denominators)

Despite limitations, routine health facility data are an important source of timely information!

Quality of RHIS data can improve through increased analysis and use

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[1] World Health Organization (2021). Toolkit for analysis and use of routine health facility data - General principles.

Note: The WHO *Toolkit for analysis and use of routine health facility data – General principles* document uses the terms routine health information system but says that the RHIS may also be referred to as the health management information system (HMIS).

Guidance on analysing and using health facility data for maternal, newborn, child and adolescent health
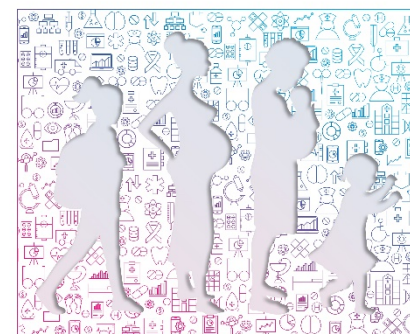
Purpose

The objectives of *Analysis and use of health facility data: guidance for maternal, newborn, child and adolescent health programme managers* are to assist maternal, newborn, child and adolescent health (MNCAH) programme managers to:

- understand a catalogue of MNCAH indicators that can be collected and reported through routine health information systems (RHIS);
- conduct basic analyses of these indicators for MNCAH programme monitoring;
- interpret visualizations of these indicators with respect to MNCAH programme management.

Analysis and use of health facility data

Guidance for maternal, newborn, child and adolescent health programme managers

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Audience

The guidance is relevant for a range of stakeholders, including:

- ministry of health staff working on MNCAH programme(s), monitoring, and evaluation activities, and the RHIS at national and subnational levels;
- staff of partner organizations involved with supporting MNCAH programme(s), monitoring, and evaluation, and/or health system strengthening; and
- consultants and staff working at research institutes involved with the analysis of MNCAH data and/or efforts to improve the quality of routine MNCAH data.

Guidance available at: https://iris.who.int/handle/10665/373826
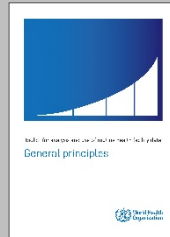
WHO toolkit for routine health information systems data

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WHO has developed [guidance and tools](#) to support countries in strengthening health information systems and enhancing RHIS data use

STANDARDS FOR MEASUREMENT AND ANALYSIS
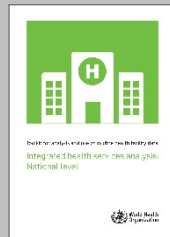
General principles   **Core indicators**   **Data quality**
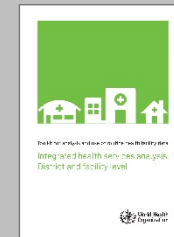
General guidance for national and district managers

National level   **District level**
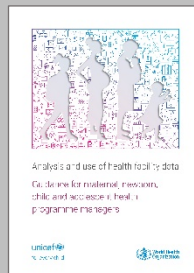
Mortality & Morbidity
Access, coverage & quality
Health service inputs

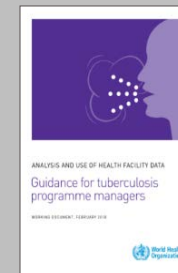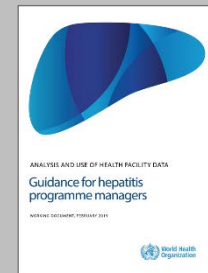**PROGRAMME-SPECIFIC GUIDANCE**

MNCAH   **Immunization**   **HIV**   **Malaria**   **Tuberculosis**   **Hepatitis**

Background

As part of the WHO Toolkit for RHIS data, several WHO programmes (e.g., HIV, immunization, malaria, tuberculosis) developed "working documents" that served as programme-specific guidance modules of the WHO toolkit.

In October 2019, WHO and UNICEF released a draft working version of a guidance module for MNCAH.

Revisions and updates

Since 2019, the *draft working version* of the MNCAH guidance module was disseminated through WHO, UNICEF and partners agencies and introduced in various regional and country workshops.

2019: *draft working document*
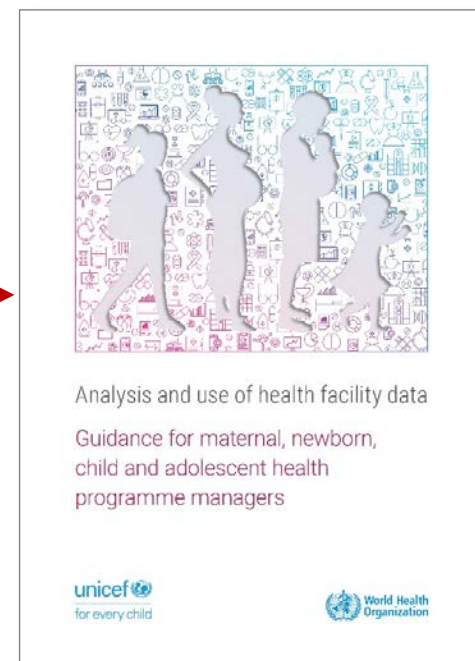
2023: *official publication* of guidance

Feedback on the guidance was gathered and incorporated into revisions to the guidance:
- Indicators that were poorly received by MNCAH stakeholders at country level were refined or removed.
- New indicators were proposed based on new WHO guidelines and monitoring frameworks and from recommendations from MNCAH measurement advisory group.
- An annex on data quality considerations for MNCAH programme managers was added to the guidance.
- WHO developed and tested capacity strengthening materials to accompany the guidance.

Indicators for monitoring MNCAH through national routine health information systems

The guidance recommends **indicators for monitoring across the MNCAH continuum through RHIS data**.
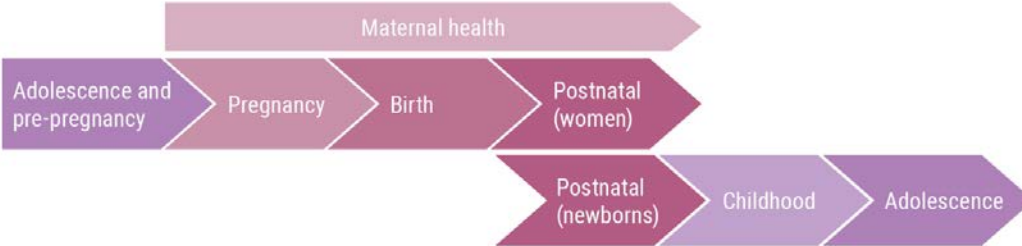
- For each indicator, a **definition, computation (numerator/denominator) and suggested disaggregation** are provided.

Indicators cover:

- Contacts with health facilities across MNCAH
- Content of care during antenatal, childbirth and postnatal periods
- Specific interventions during childhood and adolescence
- Institutional MNCAH mortality and stillbirths

- Indicators are **aligned with relevant indicators from other WHO RHIS toolkit programme modules** (e.g. HIV, immunization, malaria, tuberculosis).
- Based on a global consultation, a **minimum set of indicators for MNCAH routine programme monitoring** is recommended (as a *subset of the larger catalogue* of indicators).
- **Analyses/visualizations and considerations for interpretation** are recommended.
- Additional MNCAH facility-based indicators and indicators to monitor related processes (e.g. civil registration, maternal and perinatal death surveillance and response) are offered in an Annex.
- An Annex on **data quality** highlights considerations for using routine MNCAH facility data.

- While guidance on monitoring is important for providing evidence-informed measurement standards, it is not sufficient on its own to create a culture of data use.

- Strenghtening capacity of MNCAH managers at all levels to understand and interpret existing data is critical for sustainably improving the quality and use of data for decision-making.

Materials for strengthening capacity in analysis and use of MNCAH data

To accompany the guidance, WHO developed materials for **capacity strengthening in analysis and use of routine facility data for MNCAH.**

Objectives

The purpose of the presentation and exercise materials is to:

- introduce MNCAH indicators for routine reporting through RHIS from *Analysis and use of health facility data: guidance for MNCAH programme managers*;
- review concepts and methods used to assess the quality of and analyse RHIS data;
- strengthen capacity of MNCAH managers to interpret and use data for decision-making.

Audience

The materials are intended for:

- MNCAH managers at all levels of the health system;
- partner organizations seeking to introduce and use *Analysis and use of health facility data: guidance for MNCAH programme managers*

Presentation materials

Companion exercises

Analysis and use of health facility data

Companion exercises to strengthen analysis and use of health facility data for maternal, newborn, child and adolescent health

Facilitator guide

Analysis and use of health facility data

Companion exercises to strengthen analysis and use of health facility data for maternal, newborn, child and adolescent health

FACILITATOR GUIDE

Process for developing the capacity strengthening materials

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Presentations and exercises were developed, tested and refined during several WHO regional and country capacity strengthening workshops.

Multi-programme country workshops
Held in several countries together with HIV, immunization, malaria, MNCAH, NTDs, TB, and HIS programmes with focus on understanding how and which RHIS indicators are being measured in countries (*Q4 2018-Q2 2019*)

MNCAH-focused multi-country workshop
Brought together several countries in WHO African Region to focus on use of data for monitoring progress towards Sustainable Development Goal 3 (*Q4 2019*)

MNCAH monitoring during COVID-19
As part of three-level WHO initiative *COVID-19: Mitigating indirect impacts on MNCAH and Ageing Services,* interactive online orientation sessions on analysis, interpretation, quality and use of routine MNCAH data for decision-making (*Q4 2021*)

MNCAH-focused training of trainers
Multi-country workshops in WHO African Region on strengthening routine data collection, analysis and use (*Q4 2022, Q2 2023*)

With support from USAID partners (*Data for Impact; Global Evaluation & Monitoring for Health; Country Health Information Systems and Data Use– through John Snow Inc.*), WHO consolidated and further developed the capacity strengthening materials to make available with the guidance.

Suggested flow for using the capacity strengthening materials

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Presentation materials

- Introduce and review different concepts related to collection, reporting, quality, analysis, interpretation and use of MNCAH data
- Intended to be followed by exercises to reinforce comprehension
- Can select specific modules as appropriate for the setting/audience and adapt further to include national/subnational examples

Companion exercises

- In a workshop setting, exercises may be done through a mix of plenary discussion, group work and individual completion
- Can select specific exercises from the exercise book depending on the audience and purpose/length of the capacity strengthening workshop
- Microsoft Excel template for mapping MNCAH indicators from guidance to national RHIS indicators is available

Facilitator guide

- Notes and tips for facilitators on the exercises and workshop
- Sample workshop agenda for further adaptation
- Pre- and post-workshop assessment forms

Links to materials
- Presentations materials:
  - https://www.who.int/publications/i/item/9789240080331
- Companion exercises to strengthen analysis and use of health facility data for MNCAH:
  - https://iris.who.int/bitstream/handle/10665/373804/WHO-MCA-2023.10.01-eng.pdf
- Companion exercises to strengthen analysis and use of health facility data for MNCAH - Facilitator guide:
  - https://iris.who.int/bitstream/handle/10665/373805/WHO-MCA-2023.10.02-eng.pdf

Presentation

- **Health information system: Types and sources of health data with a spotlight on routine health facility data**

  - Objectives:

    - Review key types and sources of health data, including differences, advantages and limitations

    - Outline key sources of data for MNCAH

    - Provide background on what is meant by routine health information system and why it is important

    - Review types of health facility data collection and reporting tools and forms

    - Introduce how raw data and data elements become useable information

Relevant exercises in *Companion exercises to strengthen analysis and use of routine health facility data for MNCAH*

- **Types and sources of MNCAH data**
  - Exercises can be completed individually or in small groups
  - Should be reviewed in plenary discussion

Presentation

- **Routine health facility data indicators for MNCAH**

    - Objectives:

        - Provide overview of global status of key indicators on MNCAH and background on global initiatives toward reducing preventable mortality and improving health across MNCAH

        - Introduce the MNCAH module of the WHO Toolkit on Routine Health Information Systems (RHIS) Data

        - Review recommended indicators for monitoring through routine health information systems from the WHO guidance *Analysis and use of health facility data: guidance for MNCAH programme managers*

        - Consider how MNCAH indicators/data elements from WHO toolkit can be incorporated into national RHIS

Relevant exercises in *Companion exercises to strengthen analysis and use of routine health facility data for MNCAH*

- **Routine health facility data indicators for MNCAH**
- Other accompanying materials:
    - MNCAH RHIS indicators - country mapping template (Microsoft Excel file)
        - Template should ideally be filled prior to workshop and reviewed in group work or plenary discussions

Presentation

- **Data quality considerations for MNCAH managers**
  - Objectives:
    - Describe common data quality problems with routine health information system (RHIS) data.
    - Explain the importance of data quality with respect to using RHIS data on MNCAH for decision-making.

STRENGTHENING ANALYSIS AND USE OF ROUTINE FACILITY DATA
FOR MATERNAL, NEWBORN, CHILD AND ADOLESCENT HEALTH

Data quality considerations
for MNCAH managers

Relevant exercises in *Companion exercises to strengthen analysis and use of routine health facility data for MNCAH*

- **Data quality**
  - Exercises can be completed individually or in small groups
  - Should be reviewed in plenary discussion

Analysis and use of health facility data

Companion exercises to strengthen
analysis and use of health facility data
for maternal, newborn, child and
adolescent health

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Presentation

- **Data triangulation: Using multiple sources of MNCAH data together**

  - Objectives:

    - Understand the basic concepts principles and approaches of data triangulation

    - Introduce steps of triangulation process

    - Identify how triangulation approaches can be used for MNCAH data analysis and making decisions

    - Discuss strengths and weaknesses of data triangulation

STRENGTHENING ANALYSIS AND USE OF ROUTINE FACILITY DATA FOR MATERNAL, NEWBORN, CHILD AND ADOLESCENT HEALTH
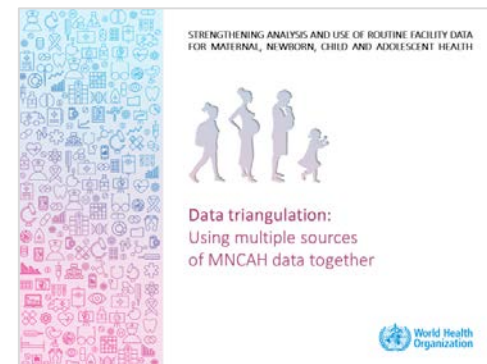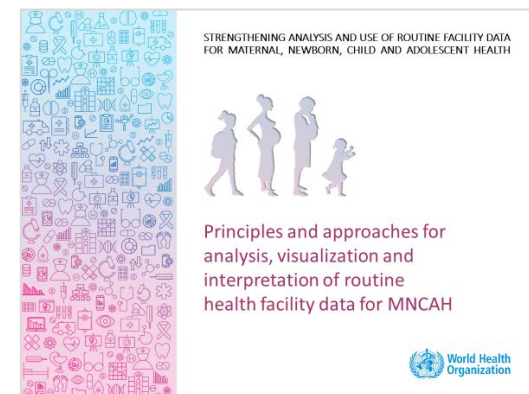
Data triangulation:
Using multiple sources
of MNCAH data together

Relevant exercises in *Companion exercises to strengthen analysis and use of routine health facility data for MNCAH*

- **Data triangulation**

  - Practical exercise using MNCAH data from multiple sources to answer questions

  - Links to relevant data provided with option for workshop participants to use their own data to complete the exercise

Analysis and use of health facility data

Companion exercises to strengthen analysis and use of health facility data for maternal, newborn, child and adolescent health

Presentation

- **Principles and approaches for analysis, visualization and interpretation of routine health facility data for MNCAH**

  - Objectives:
    - Review key health data terms and concepts
    - Introduce common principles and approaches to analysis of routine health facility data
    - Understand the basic concepts of data visualization
    - Explore tips for data visualization
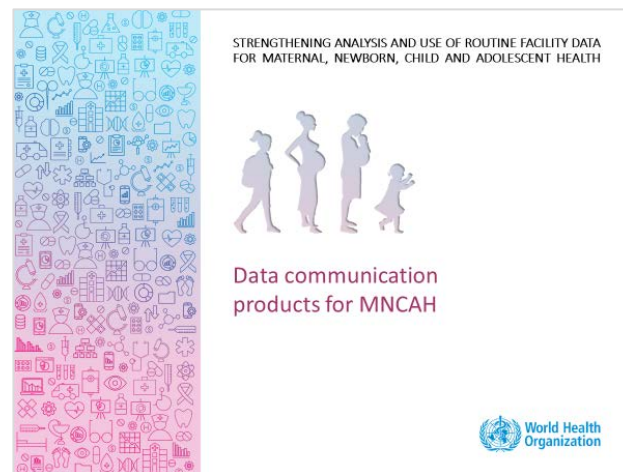   - Introduce data interpretation

Relevant exercises in *Companion exercises to strengthen analysis and use of routine health facility data for MNCAH*

- **Analysis, visualization and interpretation of MNCAH data**
  - Part 1: Key health data terms and concepts
    - Exercises can be completed individually or in small groups
    - Should be reviewed in plenary discussion
  - Part 2: Triangulation, analysis, and interpretation of MNCAH data: case study
    - Case study example to apply methods and concepts from previous sessions
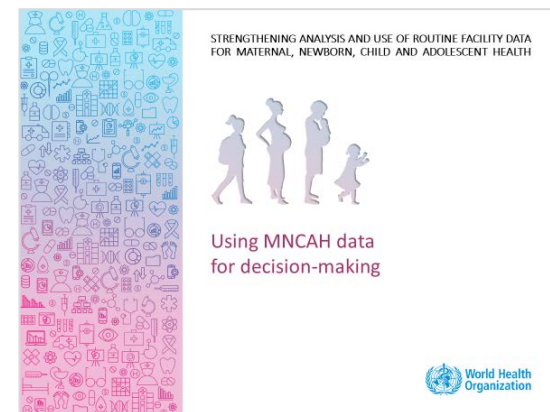
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Presentation

- **Data communication products for MNCAH**

  - Objectives:

    - Review types and formats for communicating data

    - Provide tips for thinking through and improving the communication of data

- No companion exercises are included in the exercise book, however:

  - Concepts introduced in the session should be considered and, if desired, can be used to add specificity to practical exercises from other sessions (e.g., participants can be guided to develop a specific type of communication product for the practical case studies)

STRENGTHENING ANALYSIS AND USE OF ROUTINE FACILITY DATA FOR MATERNAL, NEWBORN, CHILD AND ADOLESCENT HEALTH

Data communication products for MNCAH

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Presentation

- **Using MNCAH data for decision-making**
  - Objectives:
    - Understand the importance of using data to inform decisions
    - Review steps in using data for decision-making

STRENGTHENING ANALYSIS AND USE OF ROUTINE FACILITY DATA FOR MATERNAL, NEWBORN, CHILD AND ADOLESCENT HEALTH

Using MNCAH data for decision-making

World Health Organization

Relevant exercises in *Companion exercises to strengthen analysis and use of routine health facility data for MNCAH*

- **Using MNCAH data for decision-making**
  - Exercise should be completed in groups using real data from the country/subnational area
  - Presentations from group work should be reviewed in plenary in a facilitated discussions

Analysis and use of health facility data

Companion exercises to strengthen analysis and use of health facility data for maternal, newborn, child and adolescent health

World Health Organization

Reflection on the guidance and capacity strengthening materials

• Maria Muñiz, Senior Adviser Statistics & Monitoring (Health, Immunization, MNCAH & HIV), Division of Data, Analytics, Planning and Monitoring, UNICEF

• Dr Benson Droti, Team Lead, Health Information System, WHO Regional Office for Africa

• Dr Khalid Siddeeg, Regional Adviser, Child and Adolescent Health, WHO Regional Office for the Eastern Mediterranean

• Barbara Rawlins, Senior Implementation Research Advisor, Bureau for Global Health, USAID

Discussion facilitated by Dr Theresa Diaz, Unit Head, Epidemiology, Monitoring and Evaluation, WHO Department of Maternal, Newborn, Child and Adolescent Health

Thank you!

Links to all materials available through: https://www.who.int/publications/i/item/9789240080331

For more information, please contact mncahdata@who.int.