Session 4 - Using data and analytics to improve performance of care and access to services - “Treating patients as VIP”

Facilitator: Mark Landry, WHO/SEARO
Session objective and contents

Objectives:

• Highlight the importance of data use, especially at sub-national and facility levels
• Sharing experiences of data use in different contexts

Contents

1. Importance of sub-national data
Theo Lippeveld, RHINO

2. Designs to optimize use of data to drive impact
Jorn Braa, University of Oslo

3. Driving specific programmes:
   - NCDs,
   - TB,
   - MNCAH
Jennifer Cohn, Resolve to Save Lives,
Sismanidis Charalampos, TB Programme, WHO
Elizabeth Katwan, MNCAH, WHO
Session 4 Using data and analytics to improve performance of care and access to services “Treating patients as VIP”

Facilitator

Mark Landry  WHO SEARO

Mark Landry is the Regional Adviser for Health Information Systems at the Regional Office of South-East Asia of the World Health Organization. Mr. Landry has more than 20 years of experience supporting low resource countries with digital transformation of their health information systems and has provided technical assistance to more than 40 countries in Asia, Africa and the Pacific. He specializes in advising Ministries of Health with the development and implementation of sound health information policies and regulations and improving institutional capacity for assessment, strategy development, architecture road-mapping, action planning, and implementation of programme management techniques for scalable and sustainable HIS solutions. He is well-versed in adapting digital health and innovations for improving healthcare service delivery, in global monitoring of universal health coverage, and tracking progress of the health-related Sustainable Development Goals. He works closely with countries to adapt systems and platforms to utilize national health data and indicators to better analyze, interpret, and use health intelligence for evidence-based health policy and planning.

Speakers

Theo Lippeveld  RHINO

Theo Lippeveld, MD, MPH is a public health physician with more than forty years of experience in health policy analysis, health services planning in developing countries, and monitoring and evaluation. His specific area of strength and focus in the last thirty years has been the design and implementation of national routine health information systems (e.g. Chad, Eritrea, Ethiopia, Liberia, Madagascar, Morocco, Niger, Pakistan). He is co-founder and board member of the Routine Health Information Network (RHINO) and has published numerous articles and books on information systems. He currently is retired, but continues to work via RHINO on RHIS strengthening in lower and middle income countries (LMICs).

Dr. Lippeveld has a medical degree from the University of Louvain (Belgium), a master degree in public health from Harvard University (USA), and a diploma in tropical medicine and hygiene from the Tropical Institute of Antwerp (Belgium). Between 1989 and 1997, he was development advisor at the Harvard Institute for International Development and visiting lecturer at the Harvard School of Public Health (USA). He also was adjunct lecturer at Brandeis University (USA), where he taught a course on Routine Health Information Systems for international students.
Jørn Braa  University of Oslo

Jørn Braa is a Professor of Informatics at the Department of Informatics, University of Oslo, Norway. He is an expert in the field of Digital Health and Health Information Systems (HIS), IT for Development (IT4D) and Systems Analysis, Action Research and Systems Development. He graduated with a degree in information systems and took his PhD on “HIS in developing countries,” based on fieldwork in Mongolia and South Africa. Since 1993 he has worked extensively with national and local health authorities on assessing, designing and developing Health Information Systems and on developing human and institutional capacity in a number of countries in Africa and Asia, including South Africa, India, Mozambique, Rwanda, Ethiopia, Kenya, Tanzania, Senegal, Burkina Faso, Malawi, Bu-rundi, Sierra Leone, Ghana, DRC, Mongolia, Vietnam, Indonesia, Sri Lanka, and Lao PDR.

From 1994 to 2000, Professor Braa was part of the development of the South African District Health Information System, which became a “best practice” HIS in Africa and in the world. Based in South Africa, and together with colleagues from the Universities of Cape Town and Western Cape, he initiated the Health Information Systems Programme (HISP) and the open-source DHIS software project, which later became the DHIS2 movement.

Charalampous Sismanidis  World Health Organization

Charalampous (Babis) SISMANIDIS is a data scientist with over 20 years of combined international work experience at WHO and schools of public health in the UK (St George’s Hospital Medical School and London School of Hygiene and Tropical Medicine). He holds a first degree in mathematics (BSc) and advanced education in Medical Statistics (MSc, PhD).

Babis has been with the Global TB Programme at WHO since 2009 at positions of increasing seniority. He is currently Team Lead for strengthening national TB surveillance systems and the data they produce, supporting priority TB epidemiological studies, and the routine use of all these data for policy, planning and programmatic action. He is passionate for designing and delivering data generation and data use solutions to address country needs for different settings and audiences.
Global consultation to optimize Routine Health Information Systems (RHIS) to effectively deliver Universal Health Coverage (UHC) and improve Primary Health Care (PHC) in countries

Session 4 - Using data and analytics to improve performance of care and access to services - “Treating patients as VIP”

Facilitator: Mark Landry, WHO/SEARO
Session objective and contents

Objectives:
• Highlight the importance of data use, especially at sub-national and facility levels
• Sharing experiences of data use in different contexts

Contents
1. Importance of sub-national data
   Theo Lippeveld, RHINO
2. Designs to optimize use of data to drive impact
   Jorn Braa, University of Oslo
3. Driving specific programmes:
   o NCDs,
   Jennifer Cohn, Resolve to Save Lives,
   o TB,
   Sismanidis Charalampos, TB Programme, WHO
   o MNCAH
   Elizabeth Katwan, MNCAH, WHO
Creating an Information Culture at district level and in health facilities

Theo Lippeveld, MD, MPH
Senior HIS Adviser
RHINO

September 2, 2021
Optimizing RHIS workshop
The role and importance of decentralized Routine Health Information System (RHIS)

- Facility-based and ideally also community-based
- Main source of information for (daily) planning and management of quality health services at district level and below
  - Coverage and quality of health interventions
  - Disease surveillance
  - Commodity security
  - Human resource management
  - Financial information systems
- Eventually also feeding information into national and global levels (but not its primary role)
- Ideal support to integrated management of health interventions
Unfortunately...

Routine health information systems in most developing countries are woefully inadequate to provide the needed information support ...
What is wrong with existing routine health information systems?

- Irrelevance, plethora, and poor quality of the data collected
- Fragmentation into “program-oriented” information systems: duplication and waste
- Poor and inadequately used HIS and ICT infrastructure and resources

MOST OF ALL

- Absence of information culture where data are valued for decision making
Need to Establish a “Culture of Information”

Operational definition

“The capacity and control to promote values and beliefs among members of an organization for collection, analysis and use of information to accomplish its goals and mission.”
What drives Culture of Data Use? (JLN, 2018)

Clear roles and responsibilities around decision making (DM)

Evidence-based actions show the value of quality data for DM

Decentralized organizational structure

Robust data feedback loops throughout the health system

No-blame environment with respect and transparency

Mutual accountability and shared ownership within the health system, and with the community

Encouragement/incentives to motivate behavioral change

HIS competencies at all levels
Illustrative Interventions to Promote Data Culture at district level and below

Role modeling by Senior Management for use of information

Human Centered Design (HCD) involving users at the RHIS design stage (e.g. Ethiopia, Tanzania, Malawi data use partnerships)

Disseminate success stories on use of HIS information
- Publication of district level indicators through media (Uganda)
- Allocation of resources based on HMIS indicators (Brazil)

Institutionalizing use of RHIS information
- Use of information as a criteria for annual performance appraisal

Health Services Performance Review meetings
- with focus on using RHIS data (problem solving methodology)

Creating data use incentives
- Performance based financing (PBF)
Case Study: Creating an information culture in Soro woreda (=district) in SNNPR/Ethiopia (IHFP, 2016)

“Two years ago, we were the least performing woreda in the zone. The training we received on how to use our performance data to make decisions and take action was an eye opener. We knew very little about using our own data to identify our own gaps and propose solutions.

Now, we are completely data-driven. Soro Woreda health office has witnessed a growing interest in use of performance data for DM, making it a cliché in the hearts and minds of health workers and managers in the woreda.

Abenezer Bekele, Head of Soro Woreda HO.
Challenges and the way forward to introduce information culture at district and facility levels

- Creating an information culture is a behavioral intervention: it will take time to see results!
- Measure information culture based on PRISM assessments
- RHIS capacity building to improve data analysis, problem solving and advocacy skills of district and facility staff
- Can you share a good story on gradual introduction of use of information for decision making in your country or district?
Data Driven Culture – when you use the data you collect to help guide your decisions
THANK YOU

Theo Lippeveld, MD, MPH
Senior HIS Adviser
tlippeveld@gmail.com
RHINO: www.rhinonet.org

Improving the use of health data for health system strengthening, by Tara Nutley and Heidi Reynolds. Global Health Action, 2013


The Art and Necessity of building a data culture. By Ben Mann in MERL Tech, 2018
Designing for data use at facility and district levels

Jørn Braa, University of Oslo

Study of data use and efforts for improvements in Indonesia, Rwanda and Mozambique

Approach:
1. Identify routine data use situations and useful information ‘products’ (e.g. dashboards)
2. Identify problems and missing data for making the designed dashboard in DHIS2
3. ‘Solve the problem’ – Design and demonstrate needed improvements
4. Demonstrate results for users – participation on further improvements
Indonesia:
Routine monthly data use meetings in all Health Centres

Objective for data use:
• Dashboards with facility data for data use meetings

Challenge:
• (e.g.) EPI is using Excell for data management and reporting – generic dashboard not possible

Solution:
• Upload Excell sheets with facility data to DHIS2 & generate dashboards

Pre Lokmin:
Checking data quality (monthly)

LOKMIN (lokakarya mini) monthly meeting, data based evaluation
Rwanda: Routine monthly data use meetings

**Hospitals and Health Centres:**
- Data validation; before 5th each months
- Monthly: ‘Quality assurance’ meetings, analyzing data
- Monthly ‘Staff meetings’, all performance indicators

**Objectives for improving data use:**
Dashboards for facility performance coverage indicators

**Challenge:**
Facility population target denominators not available
Census numerators not aligned with catchment areas

**Solution (example):**
Calculate proportion of district population from routine
Date for each HC and make dashboards in DHIS2

**Districts**
- Monthly coordination meetings
- Data managers and heads from All facilities + district
‘Live example’ from Mozambique: Monthly meetings using EPI scorecard to discuss performance ‘face to face’ with each facility

Facility population denominators not available

Data copied manually from DHIS2 to Excel

EPI has targets by Facility & capture Manually in Excel

Objective: Make generic DHIS2 dashboard by importing EPI targets
Facility Based Scorecard January-July, 2021, Jan-June compared with July, Quelimane District, Zambezia Province, Mozambique

<table>
<thead>
<tr>
<th>Data</th>
<th>FA</th>
<th>FA</th>
<th>FA</th>
<th>FA</th>
<th>FA</th>
<th>FA</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS Chabeco</td>
<td>22.1</td>
<td>28.6</td>
<td>117</td>
<td>137</td>
<td>83.3</td>
<td>50</td>
</tr>
<tr>
<td>CS Estação Malanha</td>
<td>85.3</td>
<td>97.6</td>
<td>93.3</td>
<td>82.5</td>
<td>46.3</td>
<td>15</td>
</tr>
<tr>
<td>CS Coiâne</td>
<td>91.3</td>
<td>92.1</td>
<td>100</td>
<td>99.3</td>
<td>93.3</td>
<td>91.5</td>
</tr>
<tr>
<td>CS Maquíval-Rio</td>
<td>100.5</td>
<td>102.8</td>
<td>92.2</td>
<td>105.9</td>
<td>98</td>
<td>102.9</td>
</tr>
<tr>
<td>CS Varela</td>
<td>84.8</td>
<td>114.3</td>
<td>85.8</td>
<td>83</td>
<td>65.7</td>
<td>62.3</td>
</tr>
<tr>
<td>CS Naminho</td>
<td>19.5</td>
<td>20.9</td>
<td>22.4</td>
<td>24.6</td>
<td>10.4</td>
<td>10.5</td>
</tr>
<tr>
<td>CS 17 De Setembro</td>
<td>204.3</td>
<td>181.7</td>
<td>190.2</td>
<td>202.7</td>
<td>59.2</td>
<td>86.6</td>
</tr>
<tr>
<td>CS Sangarivera</td>
<td>113.1</td>
<td>126.2</td>
<td>118.3</td>
<td>102.5</td>
<td>89.6</td>
<td>52.5</td>
</tr>
<tr>
<td>CS Longe</td>
<td>79.6</td>
<td>87.9</td>
<td>90.4</td>
<td>105.6</td>
<td>73.5</td>
<td>90.7</td>
</tr>
<tr>
<td>PS Marrongane</td>
<td>92.4</td>
<td>96.5</td>
<td>105.7</td>
<td>118.9</td>
<td>64.5</td>
<td>107.5</td>
</tr>
<tr>
<td>CS Micejune</td>
<td>177.9</td>
<td>208.1</td>
<td>202.9</td>
<td>208.6</td>
<td>94.3</td>
<td>120</td>
</tr>
<tr>
<td>CS Inhangulue</td>
<td>88.5</td>
<td>86.2</td>
<td>111.7</td>
<td>107.4</td>
<td>90.1</td>
<td>70.4</td>
</tr>
<tr>
<td>CS Maquíval Sede</td>
<td>72.9</td>
<td>66</td>
<td>65.3</td>
<td>109.1</td>
<td>15.5</td>
<td>8</td>
</tr>
<tr>
<td>CS 4 de Dezembro</td>
<td>28.7</td>
<td>24.7</td>
<td>70.3</td>
<td>83.1</td>
<td>48.4</td>
<td>49.4</td>
</tr>
<tr>
<td>CS Icídua</td>
<td>127</td>
<td>132.4</td>
<td>141.4</td>
<td>145.7</td>
<td>52.4</td>
<td>37.1</td>
</tr>
<tr>
<td>CS 24 de Julho</td>
<td>70.1</td>
<td>90.2</td>
<td>81.9</td>
<td>115.2</td>
<td>37.3</td>
<td>36.2</td>
</tr>
<tr>
<td>CIDADE DE QUELIMANE</td>
<td>108.2</td>
<td>120.6</td>
<td>97.3</td>
<td>107.2</td>
<td>56.5</td>
<td>56.2</td>
</tr>
</tbody>
</table>

BCG, DPT3 and Measles & Rubella Vaccine coverage by facility

EPI targets by facility
Imported and used
As denominator

Ranges and colours
Are flexible, being discussed with EPI and users

Red: 0 – 50%
Light Red: 50 – 75%
Light Green: 75 – 90%
Green: 90 – 140%
Blue: 140%+ (-too high coverage)
## Alternative version, by month:

**Facility Based Scorecard January-July, 2021, Quelimane District**

Dashboard showing vaccine coverage for every facility month by month

<table>
<thead>
<tr>
<th>Data</th>
<th>FAI PAV - Cobertura de BCG (Mensal)</th>
<th>FAI PAV - Cobertura DPT 3º Dose (Mensal)</th>
<th>FAI PAV - Cobertura Sarampo-Rubéola (Mensal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS Chabeco</td>
<td>28.6</td>
<td>20.4</td>
<td>28.6</td>
</tr>
<tr>
<td>CS Estação Malanga</td>
<td>97.6</td>
<td>95.2</td>
<td>83.3</td>
</tr>
<tr>
<td>CS Coarane</td>
<td>82.1</td>
<td>88.7</td>
<td>85.4</td>
</tr>
<tr>
<td>CS Macuial-Rio</td>
<td>102.8</td>
<td>116.7</td>
<td>102.8</td>
</tr>
<tr>
<td>CS Varella</td>
<td>114.3</td>
<td>98.2</td>
<td>100</td>
</tr>
<tr>
<td>CS Nampirio</td>
<td>20.9</td>
<td>18.7</td>
<td>26.7</td>
</tr>
<tr>
<td>CS 17 De Setembro</td>
<td>181.7</td>
<td>206.7</td>
<td>207.5</td>
</tr>
<tr>
<td>CS Sangaívera</td>
<td>128.2</td>
<td>109.5</td>
<td>78.6</td>
</tr>
<tr>
<td>CS Longe</td>
<td>87.9</td>
<td>91.4</td>
<td>87.9</td>
</tr>
<tr>
<td>PS Marrongane</td>
<td>96.5</td>
<td>70.2</td>
<td>91.2</td>
</tr>
<tr>
<td>CS Micajue</td>
<td>208.1</td>
<td>186.5</td>
<td>170.3</td>
</tr>
<tr>
<td>CS Inhanguile</td>
<td>85.2</td>
<td>100</td>
<td>75.9</td>
</tr>
<tr>
<td>CS Macualí Sede</td>
<td>86</td>
<td>86.2</td>
<td>103.2</td>
</tr>
<tr>
<td>CS 4 de Dezembro</td>
<td>24.7</td>
<td>29.2</td>
<td>13.5</td>
</tr>
<tr>
<td>CS Icidua</td>
<td>132.4</td>
<td>118.9</td>
<td>108.1</td>
</tr>
<tr>
<td>CS 24 de Julho</td>
<td>90.2</td>
<td>78.8</td>
<td>64.3</td>
</tr>
<tr>
<td>CIDADE DE QUELIMANE</td>
<td>120.6</td>
<td>119.2</td>
<td>110.5</td>
</tr>
</tbody>
</table>

**Color Key:**
- **Red:** 0 – 50%
- **Light Red:** 50 – 75%
- **Light Green:** 75 – 90%
- **Green:** 90 – 140%
- **Blue:** 140%+ (? too high coverage)
Findings from Designing for data use study and interventions in Indonesia, Rwanda and Mozambique

- Potential for routine data use is good; routine data use meetings at districts and facility levels in all countries
- Potential of digital tools and DHIS2 underutilised
- Missing facility population denominator data: major problem in most countries – obstacle for district and facility data use
- *Numerator problems in Indonesia*: Excel data management
- HR, Lab, Logistics, examples of other data sets needed to be better integrated in routine facility reporting
- Designing for data use approach is to
  - Identify problems and obstacles for data use, with users
  - Design solutions with users (e.g. for facility denominators)
  - Intervention: Test out and implement solutions
Data to Improve Performance: The Case of Hypertension

Jennifer Cohn, MD MPH
Resolve to Save Lives
2 September 2021
Significant data gaps remain for surveillance and program management.

**Surveillance**
- Risk factors
- Population incidence, cascade of care

**Program Monitoring**
- Policy
- Patient outcomes
- Costs and financing
- Health products
Program Data: The right data into the hands of the people who can act on it

1. Key elements: Minimal number of simple and important indicators
2. Collection: Streamlined data capture
3. Understand: Easy to analyze, interpret and visualize
4. Act: Training and support for clinicians and program managers to respond to data
5. Advocate: Use data for funding and program change
Simple, Powerful and Standardized Core Indicators

Hypertension Control Among Those Enrolled
Percent of registered patients with controlled BP (<140/90) at last visit (reported quarterly)

Numerator: Patients with controlled BP during the last visit in last quarter
Denominator: Patients enrolled in a hypertension control program

Estimated Control in Catchment Area
Proportion of patients with hypertension who have controlled BP in an area (reported annually)

Numerator: Patients with controlled hypertension in catchment area
Denominator: Estimated number of people with hypertension in catchment area

INDICATOR 3: Community-Level Hypertension Control
Prevalence of controlled hypertension in the community (approximately every 5 years)

Numerator: Patients with hypertension* with BP controlled to <140/90
Denominator: All patients with hypertension*

* Definition of hypertension under discussion
A radically simple app for healthcare workers to record patients’ blood pressures.

An “ultrathin” electronic health record devoted to controlling hypertension.

simple.org
Translating Data to Action

Understand

<table>
<thead>
<tr>
<th>Cause</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment</td>
<td></td>
</tr>
<tr>
<td>Process</td>
<td></td>
</tr>
<tr>
<td>People</td>
<td></td>
</tr>
<tr>
<td>Secondary</td>
<td>Problem</td>
</tr>
<tr>
<td>Primary Cause</td>
<td></td>
</tr>
<tr>
<td>Materials</td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td></td>
</tr>
<tr>
<td>Management</td>
<td></td>
</tr>
</tbody>
</table>

Act

<table>
<thead>
<tr>
<th>Payoff</th>
<th>Implement (just do it)</th>
<th>Challenge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Idea 5</td>
<td>Idea 6</td>
</tr>
<tr>
<td></td>
<td>Idea 8</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>Idea 1</td>
<td>Idea 2</td>
</tr>
<tr>
<td></td>
<td>Idea 3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Idea 4</td>
<td>Idea 7</td>
</tr>
<tr>
<td></td>
<td>Idea 9</td>
<td></td>
</tr>
</tbody>
</table>

Payoff: Easy, Difficulty, Hard
Advocate

Aggregate routine data can be a powerful advocacy tool

Supports community communication, understanding, and ownership

Helps hold us all accountable to our goal of improving health
RESOLVE
TO SAVE LIVES
AN INITIATIVE OF VITAL STRATEGIES
RESOLVETOSAVELIVES.ORG
Strengthening TB surveillance: a global synthesis of findings from national assessments, 2013–2020

Babis Sismanidis
TB Monitoring, Evaluation & Strategic Information Unit
Global TB Programme
sismanidisc@who.int

OPTIMIZING ROUTINE HEALTH INFORMATION SYSTEMS IN COUNTRIES
Virtual technical consultation, Day 2, Session 4
2 September 2021
WHO Global Task Force on TB Impact Measurement (since 2006)
National TB Programmes of many countries & key technical and funding agencies
Secretariat TB Monitoring, Evaluation & Strategic Information Unit, Global TB Programme

Mandate 2016-2020*

1. Assess progress towards national, regional and international targets
2. Guide, promote and support the analysis and use of data for policy, planning and programmatic action

Strategic areas of work 2016-2020*

1. Strengthening national surveillance systems for TB incidence & vital registration systems for TB mortality
2. Priority studies to periodically measure TB burden
3. Methods to estimate TB burden
4. Routine analysis and use of TB data at country level (guidance, tools, capacity building)

* to be extended to 2021-2025 at next meeting
National TB epidemiological reviews
strengthening national surveillance systems for TB, analysis and use of TB data for action

• **Process**: desk review of documents, interviews with MoH & stakeholders, data collation & analysis, report, in-country mission (virtual since COVID-19), ≈ 4 weeks

• **Standardisation**: terms of reference (v.1.0 2013, v.2.0 2018), implementation guidance, recommended data analysis handbook, DHIS2 platform with analytical dashboards

• **Six objectives**, with analytical tasks, promoting data ownership, use & capacity building:

  1. Assess quality and coverage of the routine TB surveillance & VR systems (using the WHO TB checklist for surveillance assessment)
  2. Assess the level of, and trends in, TB burden using surveillance, survey, programmatic and other data (national, subnational, high risk groups)
  3. Assess if trends in disease burden are plausibly related to programmatic activities
  4. Define investments/activities needed to strengthen surveillance, M&E, data generation & use
  5. Promote and facilitate ownership of findings from NTPs, facilitate feedback to all national and international stakeholders
  6. Build national and regional capacity for TB epidemiological reviews
What are TB epidemiological reviews used for?

dynamic process for informing policy, planning & programmatic action and identifying & addressing gaps in surveillance, M&E and data use

- Assessment of TB surveillance (data quality and system coverage, overall and for key groups)
- Analysis of TB and other relevant data (national, subnational, risk groups)

Findings and recommendations

What are TB epidemiological reviews used for?

dynamic process for informing policy, planning & programmatic action and identifying & addressing gaps in surveillance, M&E and data use

Programme reviews, M&E plans
National strategic plans
Investment plan for surveillance, M&E and data use to address gaps
Domestic and international resource allocation
TB epidemiological reviews, 2013-2020 *
82 countries since 2013, 51 in 2018-2020, 41 repeat assessments
mostly funded by USAID and Global Fund grants

* With results available as of April 2020. An additional 6 for the rest of 2020 and 2 so far in 2021 are not included in this synthesis.
Repeat TB surveillance assessments in Indonesia  
**case study**

### Table B1.1. Summary of results from TB surveillance assessments in Indonesia

<table>
<thead>
<tr>
<th>Standard</th>
<th>2013</th>
<th>2017</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B1.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B1.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B1.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B1.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B1.6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B1.7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B1.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B1.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B1.10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B2.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B2.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B2.3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Summary**

<table>
<thead>
<tr>
<th></th>
<th>2</th>
<th>4</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number met</td>
<td>2</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Number partially met</td>
<td>3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Number not met</td>
<td>7</td>
<td>7</td>
<td>5</td>
</tr>
</tbody>
</table>

- Results used in 2 programme reviews, development of a national strategic plan for TB and multiple funding applications
- Slow but steady improvement at the standard level. Much more important advances when looking at recommendations addressed and activities completed
- Millions of US$ raised for surveillance, M&E & data use
- Analytical capacity of national and subnational teams on routine analysis and use of surveillance data using digital platform with dashboards

- Surveillance assessments are done using the WHO TB checklist of standards and benchmarks
- There are 13 standards in total: data quality, coverage, key sub-populations
- Each standard is assessed based on measurable benchmarks
Top recommendations* from all TB surveillance assessments to address most common gaps

1. Transition to, or strengthen, digital, case-based, real-time surveillance

2. Develop or review SOPs/tools for data quality and validity

3. Improve availability and quality of TB mortality data

4. Measure level of under-reporting of diagnosed TB cases using an inventory study

5. Strengthen routine supervision for data quality checks, including via data validation workshops

6. Strengthen routine analysis and use of data at national + subnational levels

* While the top recommendation is always the same, ranking of the rest varies by WHO region (results not shown)

Findings and recommendations guide global, regional, national priorities and directions.

Global goods/tools and capacity building have been developed (or are in development) to address recommendations and strengthen TB surveillance, M&E and the analysis and use of TB data.
Addressing top recommendations

1. Transition to digital, case-based, real-time TB surveillance &
6. Routine analysis and use of data

- WHO surveillance standards for TB data entry, analysis, visualization and use (Figure 1).
- WHO TB DHIS2 package for health facility data in 60 countries: see Figure 2 for global status of implementation.
- Supporting material for package implementation and use: installation guide, guidance, exercise book and presentations for training TB staff and use packages (Figure 3)

Figure 1. WHO TB data standards

https://tbhistoric.org/

Figure 2. Global status of implementation

Figure 3. Country support material


TB is one of a multi-programme integrated approach to strengthening facility data
Acknowledgements

National TB Programmes of many countries & key technical and funding agencies

- Katherine Floyd
- Marek Lalli
- Marie Bartens
- Laura Anderson
- Hazim Timimi
- Tomas Matas
- Rafael Lopez
- Andrei Dadu
- Wilfred Nkhoma
- Kathy O’Neill

- Olav Poppe
- Knut Staring
- Charlotte Colvin
- Adam Mcneil
- Daniel Low-Beer
- Noor Abdisalan
- Ezra Tessera
- Nathalie Zorzi
- Nnamdi Nwaneri
Additional slide
Unified, digital, case-based, real-time environment for TB surveillance
all along the full pathway of TB prevention and care

Products to support this effort

1. Expanded WHO guidance on TB surveillance (2021)
2. Additions to existing DHIS2 digital environment: household/community, laboratory (2021–2022)
4. NEW! national readiness assessments of prerequisites for TB surveillance: political commitment, funding, HR, infrastructure, sustainability plan

Avoid fragmentation of information systems & project-based solutions!
Monitoring continuity of MNCAH services during COVID-19 using routine data

2 September 2021

Elizabeth Katwan, WHO/MCA
Analysis and use of health facility data - Guidance for RMNCAH programme managers was collaboratively developed by WHO and UNICEF, with extensive consultation with and feedback from partners working in reproductive, maternal, newborn, child and adolescent health (RMNCAH).

Core indicators recommended in the guidance cover:

- Family planning and contraception
- Antenatal care
- Childbirth
- Postnatal period
- Childhood and young adolescence
- Facility-based maternal, neonatal, child and adolescent deaths and institutional stillbirths

Alignment with relevant indicators from immunization, HIV, TB, and malaria programme toolkits

Metadata and suggested disaggregations and visualizations

- Accompanying dhis2 configuration package available

Regional and country capacity-strengthening workshops held in 2019
Monitoring continuity of essential health services during COVID-19

Building on the WHO operational guidance on maintaining essential health services, *Analysing and using routine data to monitor the effects of COVID-19 on essential health services - Practical guide for national and subnational decision-makers* was developed by WHO and partners.

- The guidance suggests indicators for monitoring health service utilization using data from national routine health information systems (RHIS) and provides recommendations on how to visualize and interpret trends in facility data with respect to disruptions in service utilization.
  - Emphasis on using existing data and systems
  - Simple visualizations for practical use
  - Contextual information needed for interpretation
- Module on RMNCAH, including immunization and nutrition, developed with multiple partners
Monitoring continuity of MNCAH services during COVID-19

Through the WHO initiative *COVID-19: Mitigating indirect impacts on MNCAH and Ageing Services*, WHO worked across its three levels to support country efforts to:

- Ensure continued access to and delivery of essential MNCAH services
- Adopt strategies to prevent decreases in the utilization of essential MNCAH services

- Countries reviewed MNCAH indicators reported routinely in their national health management information systems and selected indicators to monitor based what is relevant to their context and on data availability
- Dashboards visualized changes in RHIS data and allowed for comparison of data across time periods
- Simple visual data quality checks were reviewed and corrected as feasible
- Data were presented back to senior Ministry of Health officials, MNCAH Technical Working Groups, and partners in various country and regional meetings to support decision-making
Common issues across countries in analysis and use of MNCAH RHIS data during COVID-19

Data quality
- Difficult to interpret data without knowing completeness of reporting and which facilities are consistently reporting each month

Limited ability to disaggregate data
- Some groups (e.g. adolescents, older people) may be missed out in existing RHIS indicator configuration
- Some populations may be disproportionately affected but this is not reflected in aggregated data

Lack of integration of community level and private sector health data or other data sources
- During COVID-19, some services may have been diverted to community level or delivered in private sector facilities, which is not always reflected in RHIS
- Difficult to bring together data from multiple sources or from other programmes

Access to data
- Though many MNCAH indicators are reported in the national RHIS, data are not often readily available in a timely manner or cannot be shared

Limited understanding of practical and regular use of data
- While much data is collected, it is unclear how it is used for planning, prioritization, or decision-making
Improving data use requires inputs at various stages

- Strengthen governance for health information system
- Strengthen systems for collection, storage and management of data
- Strengthen skills in analysis and synthesis of health data, including data quality analysis
- Strengthening mechanisms of communication health information to facilitate their use for decision-making

Despite challenges in RHIS, there is a need to build on the momentum of enhanced interest in and innovative uses of routine MNCAH data brought about by the COVID-19 pandemic:

- Capacity strengthening within countries for analysis and interpretation
- Better understanding of how data are used practically for decision-making and action at all levels

Above image taken from presentation by WHO AFRO during workshop on strengthening routine data collection, analysis and use in RMNCAH programmes to monitor progress towards SDG3, Ndola, Zambia - September 2019