Technical review on monitoring and evaluation protocol for communicable disease surveillance and response systems

Report of a WHO meeting

Geneva, Switzerland
7–9 July 2004
TECHNICAL REVIEW ON MONITORING AND EVALUATION PROTOCOL FOR COMMUNICABLE DISEASE SURVEILLANCE AND RESPONSE SYSTEMS

REPORT OF A WHO MEETING

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World Health Organization
Department of Communicable Disease
Surveillance and Response
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I. INTRODUCTION

Monitoring and evaluation is a vital component of communicable disease surveillance and response systems that helps to ensure that surveillance systems meet the objectives for which they were developed. Monitoring progress and evaluating outcomes and impact are critical in the development of core capacities for surveillance and response.

In response to requests from Member States, WHO and partners developed a draft protocol on monitoring and evaluation of national surveillance and response systems. In addition, a global database with key indicators to document baseline data from assessments, monitor progress and help target WHO support to country specific needs has been developed.

A three day technical review meeting of the monitoring and evaluation protocol and the indicators for a global database was held in Geneva from 7 – 9 July, 2004.

II. PARTICIPANTS TO THE MEETING

The technical reviewers were carefully selected to include technical partners from the Centers for Disease Control and Prevention (CDC) and the Support for Analysis and Research in Africa Project (SARA), representatives from selected Member States and WHO country offices, WHO regional offices and WHO/HQ staff with vested interest in monitoring and evaluation of surveillance and response systems. A detailed list of participants is given in Annex 2.

III. OBJECTIVES OF THE TECHNICAL REVIEW

The objective of the technical review was to incorporate technical input from partners, regions, countries and stakeholders with the ultimate aim of making the final protocol user-friendly and adaptable to the needs of the main users.

The specific objectives were as follows:

- review the Monitoring and Evaluation (M & E) protocol in terms of structure and content
- review indicators for M & E and the indicators for the global database
- discuss and agree on standards and criteria for a functional surveillance system / IDSR (Integrated Disease Surveillance and Response) and
- propose next steps for implementation of the M & E guidelines

However, because of the limited time and the scope of work to be covered, the meeting participants recommended that:

a) the standards and criteria for a functional surveillance system be deferred to a later date in order to allow adequate time to review the M & E protocol and the
indicators for monitoring and evaluation of surveillance and response systems; and
b) the indicators for the global database will ultimately be adapted from the M & E protocol, and that this workshop should remain focused on discussing and finalizing the content and structure of the M&E protocol.

IV. PROCEEDINGS OF THE TECHNICAL REVIEW

Dr Steffano Lazzari, Director of CSR/LYO opened the technical review meeting. He acknowledged surveillance as the first level of defense to the global threat from epidemic diseases, and explained that the determinant for success in response depends on the capacity at global and national level. He affirmed the importance of having quality assurance and quality control in surveillance methods, in addition to demonstrating that the required results are produced by the surveillance system in question. He acknowledged that while monitoring and evaluation is always cited in all programme/project documents, experience indicates that it is usually donor driven and that minimal discussions on the practicability and the components to be monitored or evaluated are normally done. It is against this background that the draft protocol for M&E was developed. He reiterated the importance of the technical review in producing a robust, useful and practical guide. He echoed his confidence in the diverse experiences of the team of reviewers, whom he believed had the experience and expertise to accomplish the tasks detailed in the objectives of the meeting.

On behalf of the Assistant Director General (ADG), he thanked all the meeting participants and wished them successful deliberations.

The technical sessions were chaired by Dr Mahomed Patel (FETP, Australian National University - Canberra) and the rapporteurs were Ms Helen Perry (CDC), Dr Nada Ghosn (Ministry of Public Health, Lebanon) and Dr Ayana Yeneabat (WHO/SEARO). The major issues arising from the discussions on day one were used to reorganize the agenda for day 2 and day 3.

The meeting comprised technical presentations, group work and plenary discussions. The technical presentations included the following:
- Overview of surveillance and epidemiology by Dr Denis Coulombier
- Overview on laboratory surveillance by Dr Mohammad Youssef
- Objectives of the technical review by Dr Stella Chungong
- Overview on indicators for a global database by Dr Augusto Pinto
- Definitions of key monitoring and evaluation terminology by Dr Marta Valenciano
- Structure of the draft M & E Protocol by Dr Margaret Lamunu
- Experience with indicator development and use in the African Region by Dr Wondi Alemu
The key elements for the operational definitions of monitoring and evaluation was discussed in plenary and a small group finalized the definitions and presented it for adaptation and endorsement in plenary (Annex 3).

In the first group work session, the team of reviewers worked in three different groups to review the indicators for their clarity, feasibility, relevance, usefulness, appropriateness of the definitions, and comprehensiveness of the list. The final indicators were then categorized as core or optional. The outcome of the group work was discussed in plenary.

During the second group work session, two different groups attempted to categorize the indicators using the logical framework approach (input, process, output, outcome and impact indicators) and identified additional outcome/impact indicators and themes for evaluation questions (Annex 4). The third group reviewed chapter 8 on steps for monitoring and evaluation and proposed separate frameworks for monitoring and for evaluation. The group work sessions were presented and discussed in plenary.

V. KEY ISSUES DISCUSSED AND OUTCOMES

Overview on surveillance strategy

In light of its revision, it is important to include International Health Regulations (IHR) in the overview of surveillance strategy to strengthen country capacity. The focus should be on developing capacity at community, sub-national and national levels for all the areas that impact on health, and the notification of diseases and not just the human capacity. The need to develop and sustain partnerships and networking within the health sector and other sectors like animal health, vector control and food safety units was emphasized. It was also noted that the cycle representing the strengthening activities presented in the document, did not reflect the actual realities as they stand and there is need to have it updated.

Laboratory surveillance

The meeting stressed the need to strengthen the role of the laboratory in routine surveillance and response to communicable diseases and not just emphasize the laboratory functions

- Detection of resistance and susceptibility testing to be incorporated into the routine laboratory activities
- Important for both the laboratory and epidemiology teams to be involved in operational research on antimicrobial resistance
- Observed a need to define minimum structure/task to help guide countries in developing capacities for the laboratory
- Recommended greater involvement of WHO in the standardization of laboratory kits produced by various pharmaceutical companies in order to ensure quality.
Indicators for the global database (GDB)

It was agreed that:
- The GDB is an important tool but the indicators should be derived from the assessments and from the indicators for M & E
- The grouping of the indicators should also follow the format in the assessment protocol to avoid confusion
- It would not be realistic to give equal weights to all the indicators as some were more critical
- There was concern about how the qualitative information could be captured in the GDB as some of them could be very useful
- The GDB should be linked to the other WHO global databases.

Structure of the Monitoring and Evaluation (M & E) guide

- Table of content should be action based, with brief titles and fewer sub-headings
- Recommendation to CSR/LYO to repackage the different guidelines for surveillance and response into a modular format, and the M & E guide would constitute one of these modules
- The word "national" to be excluded from the title of the guide
- The sections on objective of the guide, who is the guide intended for, and chapters 1 to 3 to be repackaged into one Introduction chapter.

Content discussion of the guide

- Edit the M & E guide to exclude basic surveillance explanations and make reference to the other existing documents. The M & E Guide should focus more on the steps of M & E of surveillance and response systems
- Ensure consistency (in terms of technical language, indicators etc) with other existing guidelines e.g. assessment protocol, etc
- Definitions of terminologies to be made more operational. There should also be explanations or definitions of some of the words that are not so clear to all countries, e.g. health facility etc. The glossary of terminology to include definitions of common M & E words such as input, process, output, outcome and impact
- The introduction component should include a reference on IHR
- Explanations on monitoring and evaluation should be done using the logical framework approach and the indicators categorized within that framework. This should include a summary table of input, process, output, outcome and impact indicators, but with reference to the detailed indicators in annex 3 of the Guide
- Agreed that the document should focus more on M & E of surveillance and response systems, with a brief mention of M & E of projects/activities
The different components of the surveillance system for monitoring and evaluation should be depicted diagrammatically and the text should be summarized.

Include additional indicators for lab activities, and additional outcome and impact indicators.

Include a chapter on how to use the guide/adaptation at country level.

Chapter 8 of the document (Steps on Monitoring and Evaluation) should make a clear distinction between the two.

VI. NEXT STEPS AND WAY FORWARD

In order to take the guide forward, the following steps and activities were proposed:

1. End of July: finalize review of M&E indicators and share with the technical reviewers for their input.
2. Mid August: finalize revision of M&E guide and share with technical reviewers.
3. End of August: get feedback from participants.
4. Field test M&E Guideline in selected countries.
5. Adaptation of the M&E Guide by at least two regions (AFRO and EURO volunteered).
Annex 1: Agenda

Wednesday: 7 July 2004

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<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>08:00 - 08:30</td>
<td>Registration of Reviewers</td>
<td>Ms N. Damachi</td>
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<td>08:30 - 08:45</td>
<td>Welcome and Introductory Remarks</td>
<td>Dr S. Lazzari</td>
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<td>08:45 - 09:15</td>
<td>Strategy for monitoring and evaluation of national surveillance systems</td>
<td>Dr D. Coulombier</td>
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<td>- Surveillance and Epidemiology</td>
<td>Dr B. Kay</td>
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<td>- Laboratory Surveillance</td>
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<td>09:15 - 09:30</td>
<td>Objectives of the Technical Review</td>
<td>Dr S. Chungong</td>
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<td>09:30 - 10:30</td>
<td>Presentation and discussion of the global database for monitoring</td>
<td>Dr A. Pinto</td>
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<td>surveillance systems strengthening</td>
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<td>10:30 - 11:00</td>
<td><strong>Tea / Coffee break</strong></td>
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<td>Presentation and discussion of structure of the M &amp; E Guide</td>
<td>Dr M. Lamunu</td>
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<td>11:00-11:30</td>
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<td>Discussion and consensus on common M &amp; E terminology</td>
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<td>11:30 - 11:45</td>
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<td>11:45 - 12:30</td>
<td><strong>Content Discussion</strong></td>
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<td>- Objectives of the Guide</td>
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<td>- Who is the Guide intended for?</td>
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<td>- Chp 1: Overview of national surveillance and response systems,</td>
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<td>monitoring and evaluation</td>
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<td>- Chp 2: Why conduct monitoring and evaluation of national surveillance</td>
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<td>12:30 - 14:00</td>
<td>lunch break</td>
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<td>14:00 - 14:45</td>
<td>Chp 3: What aspects of the national surveillance and response systems</td>
<td>Dr Wondi Alemu</td>
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<td>should be monitored?</td>
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<td>14:45 - 15:00</td>
<td>Experience with indicator development and use in the African Region</td>
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| 15:00 - 15:30 | Group work to review and consolidate the indicators for monitoring and evaluation of national surveillance and response systems and that of the global database. For each of them, review for:  
- comprehensiveness of the list  
- relevance, clarity and feasibility of the indicators  
- usefulness of the indicators  
- appropriateness of the definitions  
- categorize indicators into core and optional groups |
| 15:30 - 16:00 | Tea / Coffee break                                                        |
| 16:00 - 17:30 | Group work continues                                                      |

**Thursday 8 July 2004**

<table>
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<th>Time</th>
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<tr>
<td>08:30 - 09:45</td>
<td>Work group reports and plenary discussion of the indicators for monitoring and evaluation of national surveillance and response systems, and the indicators for a global data base</td>
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| 09:45 - 10:30 | Chapter 4: Who should monitor and evaluate national surveillance and response systems?  
Chapter 5: When should monitoring and evaluation of national surveillance and response systems be conducted? |
| 10:30 - 11:00 | Tea / Coffee break                                                        |
| 11:00 - 12:00 | Chapter 6: How is monitoring and evaluation of national surveillance and response systems performed?  
Chp 7: How are indicators used for monitoring and evaluation of national surveillance and response systems? |
| 12:00 - 12:30 | Group work to review and discuss:  
- Chapter 8: What are the steps in monitoring and evaluation of national surveillance and response systems?  
- Annex 4: Methods for data collection for monitoring and evaluation of communicable disease surveillance and response systems  
- Annex 5: Sample tools for compiling data for monitoring and evaluation of national surveillance and response systems |
| 12:30 - 14:00 | Lunch break                                                               |
| 14:00 - 15:30 | Group work continues                                                      |
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15:30 - 16:00  Tea / Coffee break
16:00 - 17:30  Group work report and plenary discussion of chapter 8, annexes 4 and 5.

Friday 9 July 2004

08:30 - 10:30  Group work to develop standards and criteria for a functional national surveillance and response system (and IDSR)
10:30 - 11:00  Tea / Coffee break
11:00 - 12:30  Plenary discussions of the standards and criteria for a functional national surveillance and response system (and IDSR)
12:30 - 14:00  Lunch break
14:00 - 15:30  Summary and discussion of main issues, observations and recommendations.

Next steps;
- to finalize guideline
- to implement monitoring and evaluation at country level
- wrap up session
Annex 2: List of Participants

TECHNICAL PARTNERS

CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)

Ms Helen Perry, Senior Training Specialist, IDSR Team Leader, Division of Bacterial and Mycotic Diseases, Centers for Disease Control and Prevention (CDC), Atlanta, Georgia, USA

Dr Peter Nsubuga, Medical Epidemiologist, Division of International Health, Centers for Disease Control and Prevention (CDC), Atlanta, Georgia, USA

SARA

Dr Sambe Duale, Senior Research Manager and Infectious Disease Advisor, Support for Analysis and Research in Africa Project (SARA), Washington, DC., USA

FIELD EPIDEMIOLOGICAL TRAINING PROGRAMME (FETP)

Dr Mahomed Said Patel, Fellow, National Centre for Epidemiology and Population Health, Australian National University, Canberra, Australia

MINISTRY OF HEALTH AND COUNTRY OFFICES

AFRICAN REGION

Uganda

Dr Ambrose Talisuna, Assistant Commissioner, Epidemiological Surveillance Division, Ministry of Health, Kampala, Uganda

SOUTH-EAST ASIAN REGION

India

Dr Sampah K Krishnan, Office of the WHO Representative in India, New Delhi, India

EASTERN MEDITERRANEAN REGION

Lebanon

Dr Nada Ghosn, Head of Epidemiological Surveillance Unit, Ministry of Public Health, Beirut, Lebanon

WEST PACIFIC REGION

Cambodia

Dr Sok Touch, Director, Department of Communicable Disease Control, Ministry of Health, Phnom Penh, Cambodia
WHO REGIONAL OFFICES:

**Regional Office for Africa (AFRO)**

Dr Wondimagegnehu Alemu, Medical Epidemiologist, Head Sub-unit, Integrated Disease Surveillance, Division of Prevention and Control of Communicable Diseases, WHO Regional Office for Africa, Harare, Zimbabwe

Dr Louis Ouédraogo, Sub-Unit Head Data Management Communicable Diseases Surveillance and Response, Division of Prevention and Control of Communicable Diseases, WHO/Regional Office for Africa, Harare, Zimbabwe

Prof Brehima Koumaré, Inter-country Office West-African Block c/o WHO Representative, Ouagadougou 03, Burkina Faso

**Regional Office for the Eastern Mediterranean (EMRO)**

Dr Hassan El Mahdi Elbushra, Regional Adviser, Emerging Diseases, RA/CSR WHO Regional Office for the Eastern Mediterranean, Cairo, Egypt

**Regional Office for Europe (EURO)**

Dr Bernardus Ganter, Regional Adviser, Communicable Diseases, WHO Regional Office of Europe, Copenhagen, Denmark

**Regional Office for South-East Asia (SEARO)**

Dr Ayana Yeneabat, MD, MPH, Epidemiologist, Communicable Diseases Surveillance and Response (CSR) World Health Organization, Regional Office for South-East Asia New Delhi, India

**Regional Office for the Western Pacific (WPRO)**

Dr Maria Concepcion Roces, Public Health Specialist, Communicable Disease Surveillance and Response Unit, WHO Western Pacific Regional Office, Manila, Philippines
WHO HEADQUARTERS

Ms Martha Anker, CSR/LYO/EPS
Dr Eric Bertherat, CSR/ARO
Dr Stella Chungong, CSR/LYO/EPS
Dr Sebastien Cognat, CSR/LYO/LAB
Dr Denis Coulombier, Coordinator, CSR/LYO/EPS
Dr Julia Fitzner, CSR/LYO/EPS
Dr Thomas Grein, CSR/ARO/ARC
Dr Max Hardiman, CSR/IHR
Dr Brad Kay, Coordinator, CSR/LYO/LAB
Dr Margaret Lamunu, CSR/LYO/EPS
Dr Stefano Lazzari, Director, CSR/LYO
Ms Gifty-Maria Ntim, CSR/LYO/EPS
Dr Augusto Pinto, CSR/LYO/EPS
Dr Johannes Schnitzler, CSR/LYO/EPS
Dr Marta Valenciano, CSR/LYO/EPS
Dr Kaat Vandemaele, CSR/LYO/EPS
Dr Mohammad Toma Youssef, CSR/LYO/LAB
Annex 3: Proposed definitions for Monitoring and Evaluation

**MONITORING:** Monitoring is the routine (ongoing, continuous) tracking of the performance of surveillance and response programme (including projects).

**EVALUATION:** Evaluation is the periodic assessment of changes in targeted results (objectives) that can be attributed to the surveillance and response programme (including projects).
Annex 4: Conceptual framework for evaluation themes on outcome and impact of surveillance and response systems

- **Good surveillance and response system**
  - Identification of cause
  - Arrest transmission
  - Case management etc.

- **System used as model by others**
  - New universal knowledge

- **Behavior change**
  - Reporters, Implementers and programs
  - New laws and standards
  - Community trust/perception/acceptability
  - Differences in key variables between outbreaks
  - Duration in determination whether outbreak exits
  - Skill development opportunity

- **Political commitment**
  - Increased funding for surveillance

- **New partners**
  - Universities
  - Intersectoral collaboration
  - Cross border collaboration

- **Media coverage**
  - +ve or –ve

- **Reduced morbidity and mortality**