In order to achieve the goal of measles elimination and rubella control by 2020, case-based measles surveillance activities in all countries of South-East Asia Region, World Health Organization, have gained momentum resulting in increasing workload and expectations from Measles and Rubella laboratory network (MR LabNet). Maintenance of highest standards in lab reporting is the backbone of lab supported surveillance for measles elimination.

The workshop at Thimphu, Bhutan during 15–20 August 2016, dwelt on the concepts of quality assurance to enhance capacity of laboratory network. The workshop was an opportunity to establish close collaboration with surveillance team and assess the programmatic need to generate resources for lab supported surveillance. This workshop was a step forward to develop a system for internal quality assurance and support the verification towards progress in measles elimination in SEAR.
Regional Workshop for Strengthening Capacity and Internal Quality Assurance for the SEAR Measles and Rubella Laboratory Network

*Thimphu, Bhutan, 15-20 August 2016*
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Brief Overview</td>
<td>1</td>
</tr>
<tr>
<td>2. Key Discussions and Observation</td>
<td>2</td>
</tr>
<tr>
<td>3. Next Steps</td>
<td>4</td>
</tr>
</tbody>
</table>

## Annexes

<table>
<thead>
<tr>
<th>Annex</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Agenda</td>
<td>5</td>
</tr>
<tr>
<td>2. List of participants</td>
<td>11</td>
</tr>
</tbody>
</table>
1. Brief Overview

The WHO South-East Asia Region adopted in 2013 the goal of measles elimination and rubella control by 2020. This led to a tremendous increase in surveillance activities which in turn resulted in a huge workload and increased expectations from the Measles and Rubella laboratory network (MR LabNet). To enable the MR LabNet in SEAR to keep pace with increasing programmatic needs, a six-day workshop was organized from 15 to 20 August 2016 in Thimphu, Bhutan. The workshop was co-facilitated by experts from the United States Centres for Disease Control and Prevention (USCDC), WHO-HQ, and SEARO. The workshop was attended by virologists from all the 43 Measles and Rubella (MR) laboratories in the WHO South-East Asia Region (SEAR).

The prime objective of the workshop was to strengthen the quality management system in the SEAR MR LabNet. The workshop dwelt on the concepts of quality assurance and quality control by practically applying these principles to actual hands-on training, using different scenarios and simulating routine laboratory work in measles diagnosis. Participants got hands-on training in conducting internal audits, process mapping, preparing audit reports and, developing action plans for quality assurance.

The close interaction of experts with laboratory technologists from global specialised laboratory, regional reference laboratory, national laboratory and sub-national labs provided a chance to identify country specific support required to maintain the ‘Proficient laboratory’ status and ensure that quality assurance programme is operational at all laboratories.

The workshop was an opportunity to keep the MR LabNet abreast of ongoing global research and development in measles and rubella diagnostics, including molecular sequencing, multiplex immunoassay, FTA card technology, and options of alternative sampling techniques such as the use of dried blood spot. It was a platform for the laboratories in the network to share experiences and strengthen collaboration amongst them. Further, it was felt that there was a need for stronger collaboration with surveillance team for the timely receipt of samples in national and/or sub national laboratories as well as to have stronger partnerships between
laboratory officials and surveillance partners to for regular reporting to have data useful to day to day programmatic decisions.

This workshop was a step forward to support the verification process towards progress in measles elimination in SEAR along with being an opportunity to strengthen collaboration with laboratory representatives, surveillance partners and technical focal persons of WHO.

2. **Key Discussions and Observation**

   (1) Case-based surveillance requires accurate and timely laboratory confirmation by a network of proficient laboratories, and timeliness is an important parameter of proficiency. There is a strong need to encourage laboratories to strengthen collaboration with surveillance teams for the timely receipt of samples in national and/or sub-national laboratories.

   (2) Laboratories to ensure highest quality data shared regularly with the National programme managers to enable meaningful use of data by programme.

   - Each laboratory was provided a unique identifier number to ensure that the laboratory data are streamlined and reflected in the case-based surveillance data.

   - It was agreed that laboratories feed in data regularly to the National Epi/surveillance unit which would in turn classify all suspected cases and submit weekly MR case-based dataset to the SEARO database.

   (3) Molecular surveillance for measles and rubella has shown to be a valuable tool to understand the epidemiology of the virus and monitor the progress of elimination. The genotype surveillance is important to differentiate between indigenous case or an imported-related chain of transmission. Since the Region has also adopted a rubella/CRS control goal, Member States need to establish a rubella genotyping baseline to provide the data needed to monitor the progress of rubella control by making every effort to collect samples for virus detection from every outbreak detected.
(4) It was an opportunity to keep the MR LabNet abreast with ongoing global research and development in measles and rubella diagnostics

- Flinders Technology Associate (FTA) cards have shown their usefulness as a technique for transportation of infected cell lysate for molecular characterization of measles and rubella cases. However FTA cards cannot be used for transportation of specimens for IgM testing.

- The workshop discussed alternative sampling techniques such as dried blood spot (DBS), urine, oral fluid, throat samples and point of care test (POCT) as new technologies to enhance surveillance. The participants had an opportunity to perform the DBS collection and sample processing during the visit to the Royal Centre for Disease Control (RCDC), Thimphu. The procedure of DBS was discussed in detail though it is not a gold standard modality in diagnostics but can be a potential option to use in challenging situations especially in hard-to-reach areas due to geographical limitations in Bangladesh, Bhutan, Maldives, Myanmar and Nepal.

(5) In line with the WHO Framework for the Verification of Measles Elimination, it is required that network laboratories:

- follow the performance indicators of surveillance quality, including timeliness of reporting laboratory results, reporting discarded measles and rubella cases, to test all suspect cases, and to provide genotype data on each outbreak

- retain measles and rubella IgM positive serum specimens and share these for the WHO serology proficiency panel. The programmatic requirement is to confirm measles and rubella in samples received for testing. Regarding discarding of the samples negative for measles and rubella depends on the mandate of the individual lab/Member State.

- those conducting routine molecular measles and rubella testing participate in the WHO molecular External Quality Assurance (mEQA) program. Otherwise, laboratories not conducting routine molecular testing can receive practice
panels from US CDC to maintain their proficiency. Laboratories are encouraged to replace CDC primer kits annually even if they are not used up.

- Those laboratories that do not perform real-time reverse transcriptase polymerase chain reaction RT-PCR testing should use the specific conventional rubella detection kit for screening of patient specimens. It is more sensitive than the rubella genotyping kit.

- establish epidemiological link in case of situations with equivocal results/ non conclusive results / inappropriate collection time of samples/ and if second sample is desirable but is not available.

3. Next Steps

(1) Laboratories should perform annual internal auditing and submit the accreditation checklist to the Regional laboratory coordinator by March (for this year accreditation checklist shall be submitted by 31 October 2016) in accordance to the annual accreditation program implemented by The Global Measles and Rubella Laboratory Network (WHO GMRLN).

- WHO-SEARO to work with Member States to address the non-conformity identified in the lab during accreditation review so as to maintain full accreditation status. Every laboratory will undergo an onsite accreditation review, laboratory with a consistently high accreditation score may waive annual onsite review and at least once every 4 years an onsite visit shall be conducted by the WHO laboratory coordinator or a representative.

(2) There is need to enhance capacity of MR LabNet to ensure genotype surveillance of measles as required by the WHO Framework for measles elimination.

(3) Research and development activities need to be strengthened in member states to accelerate the progress towards measles elimination and rubella and CRS control in the Region.
## Annex 1

### Agenda

**Day1: Monday, 15 August 2016**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>08.30 – 09.00</td>
<td>Registration</td>
</tr>
<tr>
<td>09.00 – 09.20</td>
<td>Opening Session</td>
</tr>
<tr>
<td>09.20 – 10.00</td>
<td>Group Photograph and Coffee break</td>
</tr>
<tr>
<td>10.00 – 10.10</td>
<td>Objectives of the workshop</td>
</tr>
<tr>
<td></td>
<td>Administrative announcements</td>
</tr>
<tr>
<td>10.10 – 10.30</td>
<td>Self-Introductions of participants</td>
</tr>
<tr>
<td></td>
<td>Assign Chairperson and Rapporteur</td>
</tr>
<tr>
<td></td>
<td><strong>Session 1: How to become and remain a WHO Proficient Laboratory</strong></td>
</tr>
<tr>
<td>10.30 – 11.00</td>
<td>Quality Assurance is key to become a WHO-Proficient Laboratory</td>
</tr>
<tr>
<td>11.00 – 11.20</td>
<td>WHO Accreditation Program: A tool of improvement</td>
</tr>
<tr>
<td>11.20 – 11.40</td>
<td>Lessons learned from the accreditation review – How can we improve?</td>
</tr>
<tr>
<td>11.40 – 12.30</td>
<td>Improving laboratory performance: we can do it! Experience from 3 countries</td>
</tr>
<tr>
<td>12.30 – 13.15</td>
<td>Lunch break</td>
</tr>
</tbody>
</table>
## Regional Workshop for Strengthening Capacity and Internal Quality Assurance for the SEAR Measles and Rubella Laboratory Network

### Day 1: Monday, 15 August 2015

<table>
<thead>
<tr>
<th>13.15 – 17.00</th>
<th><strong>Session 2: How to improve for 2016: Implementing an internal audit</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Pre-test Questionnaire</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Continual Improvement in the Laboratory</strong></td>
</tr>
<tr>
<td></td>
<td>- Overview of Quality Management Systems</td>
</tr>
<tr>
<td></td>
<td>- Improvement planning</td>
</tr>
<tr>
<td></td>
<td><strong>Activity: Process Mapping</strong></td>
</tr>
<tr>
<td></td>
<td><strong>- Discussion and wrap-up</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Susie Braniff</strong></td>
</tr>
</tbody>
</table>

| 17.00 – 18.00 | **Laboratory presentation (10 minutes/labs)**                        |
|               | (moderated by Mick)                                                  |
|               | **Thai RRL**                                                          |
|               | **Sri Lanka**                                                         |
|               | **4 Sub-national, Thailand**                                          |

**Coffee break at 14.00-14.30 and Lunch break at 12.00-13.00**

**Adjourn**

### Day 2: Tuesday, 16 August 2015

<table>
<thead>
<tr>
<th>09.00 – 17.00</th>
<th><strong>Session 2 : How to improve for 2016: Implementing an internal audit (cont.)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Introduction to Internal Audits</strong></td>
</tr>
<tr>
<td></td>
<td>- The audit process</td>
</tr>
<tr>
<td></td>
<td>- Types of Audits</td>
</tr>
<tr>
<td></td>
<td>- Planning and preparation</td>
</tr>
<tr>
<td></td>
<td><strong>Activity: Asking Audit Questions</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Susie</strong></td>
</tr>
</tbody>
</table>
### Day 3: Wednesday, 17 August 2016

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 2: How to improve for 2016: Implementing an internal audit (cont.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>09.00 – 17.00</td>
<td>Interactive session: Audit Techniques</td>
</tr>
<tr>
<td></td>
<td><strong>Implementing Continuous Improvement</strong></td>
</tr>
<tr>
<td></td>
<td>- Applying the PDCA cycle</td>
</tr>
<tr>
<td></td>
<td>- Preventive and corrective action</td>
</tr>
<tr>
<td></td>
<td><strong>Activity</strong>: Laboratory Scenarios</td>
</tr>
<tr>
<td>17.00 – 18.00</td>
<td>Laboratory presentation (10 minutes/labs) (moderated by Mick)</td>
</tr>
<tr>
<td></td>
<td>Coffee break at 10.00-10.30 and 14.00-14.30 and Lunch break at 12.00-13.00</td>
</tr>
<tr>
<td></td>
<td>Adjourn</td>
</tr>
<tr>
<td>19.00 – 20.30</td>
<td>Reception Dinner</td>
</tr>
</tbody>
</table>
Day 4: Thursday, 18 August 2016

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 2 : How to improve for 2016: Implementing an internal audit (cont.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.00 – 12.00</td>
<td>Corrective and Preventive Action&lt;br&gt;Activity: 5 main laboratory errors&lt;br&gt;Post-test Questionnaire</td>
</tr>
</tbody>
</table>
| Closing Session | - Review training topics  
- Question and answer session  
- Evaluation forms (for NRL) and certificates | All facilitators |
| Coffee break at 10.00-10.30 and 15.30-16.00 | Lunch break at 12.00-13.00 |
| 13.00 – 13.30 | Session 3 : Global and regional update on measles elimination and rubella/CRS control with focus on status of laboratory supported case-based surveillance | |
| 13.00 – 13.30 | Global Measles and Rubella/CRS surveillance update: Mid-term review, importance/role of Road map to help countries accelerate surveillance from control to elimination | Mick |
| 13.30 – 14.00 | Regional Measles and Rubella/CRS Surveillance update | Sudhir Khanal |
| 14.00 – 14.20 | Global Measles & Rubella laboratory update | Mick |
| 14.20 – 14.40 | Regional Measles & Rubella laboratory update | Sirima |
| 14.40 – 15.10 | Update Regional verification measles elimination committee | Sudhir |
| 15.10 – 15.30 | Role of laboratory network in verifying elimination | Mick |
| 16.00 – 16.40 | Update regional genotypes data base and Importance of genotypes data for verifying the measles elimination status (moderated by Mick) | Patcha, Sunil, Dyah and Subangkit |
### Regional Workshop for Strengthening Capacity and Internal Quality Assurance for the SEAR Measles and Rubella Laboratory Network

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Description</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.40 – 17.10</td>
<td>Molecular epidemiology of measles to verify elimination and MeaNS submission update</td>
<td>Bettina</td>
</tr>
<tr>
<td>17.10 – 17.30</td>
<td>Molecular epidemiology of rubella and RubeNS submission update</td>
<td>Ludmila</td>
</tr>
<tr>
<td>17.30 – 18.30</td>
<td>Laboratory presentation (10 minutes/labs) (moderated by David)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>India:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Ahmedabad</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Bangalore</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Bhopal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Chennai</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 Sub-national, Thailand</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Adjourn</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Day 5: Friday, 19 August 2016**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Description</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>08.30 – 09.00</td>
<td>The use of alternative method; DBS for blood sample collection in the hard to reach area and POC</td>
<td>David</td>
</tr>
<tr>
<td>09.00 – 09.40</td>
<td>New methods:</td>
<td>Bettina</td>
</tr>
<tr>
<td></td>
<td>- NSG for whole genome sequence</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Sero-survey by Luminex</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Transport of virological specimens on FTA cards</td>
<td></td>
</tr>
<tr>
<td>09.40 – 10.10</td>
<td>Learning experience from Thailand network to develop and maintain “WHO proficient laboratory” status of 13 sub-national labs.</td>
<td>Atchariya</td>
</tr>
</tbody>
</table>

**Session 4: New and alternative technologies and approaches for a sustainable laboratory network**

**Session 5: To enhance testing quality and data**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Description</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.10 – 10.30</td>
<td>Internal quality control for IgM testing</td>
<td>David</td>
</tr>
</tbody>
</table>

**Coffee break at 10.30-11.00 and 15.30-16.00**

**Lunch break at 12.30-13.10**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Description</th>
<th>Presenter(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.00 – 11.15</td>
<td>WHO serology proficiency testing panel</td>
<td>Mick</td>
</tr>
<tr>
<td>11.15 – 11.30</td>
<td>Quality control for molecular assays</td>
<td>Bettina/Ludmila</td>
</tr>
<tr>
<td>Time</td>
<td>Session</td>
<td>Presenter(s)</td>
</tr>
<tr>
<td>-----------</td>
<td>--------------------------------------------------------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>11.30 – 11.50</td>
<td>WHO Molecular proficiency testing panel</td>
<td>Bettina</td>
</tr>
<tr>
<td>11.50 – 12.30</td>
<td>How importance of Data quality in support laboratory case-based measles rubella surveillance in SEAR</td>
<td>Tika Sedai</td>
</tr>
<tr>
<td>13.10 – 13.30</td>
<td>Introduction of Royal Centre for Disease Control (RCDC)</td>
<td>Sonam Wangchuk</td>
</tr>
<tr>
<td>13.30 – 18.00</td>
<td>Visit to RCDC and Demonstration of DBS collecting and eluting</td>
<td>Sonam Wangchuk, David, Mick, Atchariya</td>
</tr>
</tbody>
</table>

**Adjourn**

**Day 6: Saturday, 20 August 2016**

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location(s)</th>
</tr>
</thead>
</table>
| 08.30 – 11.10 | Laboratory presentation (10 minutes/labs) (moderated by Mick & David) | 2 Sub-national, Thailand, India:  
- Guwahati  
- Hyderabad  
- Jaipur  
- Kolkata  
- Lucknow  
- Patna  
- Pune  
- Bhutan  
- Bangladesh  
- DPR Korea  
- Timor-Leste  
|
Annex 2

List of participants

Ministry of Health

**Bangladesh**

Dr Khondoker Mahbuba Jamil  
Virologist  
National Polio and Measles Laboratory  
Institute of Public Health  
Dhaka

Ms Momotaz Begum  
Assistant Bacteriologist  
National Polio and Measles Laboratory  
Institute of Public Health  
Dhaka

**Bhutan**

Mr Sonam Wangchuk  
Chief laboratory Officer  
Royal Center for Disease Control  
Thimphu

Mr Rinchen Wangdi  
Laboratory Officer  
Royal Center for Disease Control  
Thimphu

**Democratic People’s Republic of Korea**

Dr Kwak Song Jun  
Director  
Communicable Disease Control Center  
Central Hygiene & Anti-Epidemic Station  
Ministry of Public Health  
Democratic People’s Republic of Korea

Dr Ro Nam Chol  
Section Chief  
Communicable Disease Control Center  
Central Hygiene & Anti-Epidemic Station  
Ministry of Public Health  
Democratic People’s Republic of Korea

**India**

Dr Jaya Lalwani  
Associate Professor  
In-charge, Measles Laboratory  
Gandhi Medical College  
Sultania Rd, Royal Market  
Near Hamidia Hospital  
Bhopal

Dr K Kaveri  
Deputy Director and Head  
King Institute of Preventive Medicine and Research  
Guindy, Chennai

Dr Sushil Kumar Singh  
Professor of Microbiology  
Department of Microbiology  
Sawai Man Singh Medical College  
JLN Marg  
Jaipur

Dr Nibedita Das  
Specialist (Microbiology)  
Institute of Serology  
3, Kyd Street  
Kolkata, West Bengal

Mrs Nikky N Srivastav  
Laboratory Supervisor  
Department of Microbiology  
Sanjay Gandhi Post Graduate Institute of Medical Sciences  
Rae Bareli Road  
Lucknow, Uttar Pradesh

Dr Deepa K Sharma  
Technical Assistant  
Enterovirus Research Centre  
Haffkine Institute Compound  
Acharya Donde Marg  
Parel, Mumbai
Regional Workshop for Strengthening Capacity and Internal Quality Assurance for the SEAR Measles and Rubella Laboratory Network

Mr Sunil R Vaidya
Scientist-E
National Institute of Virology
Dr Ambedkar Road
Post Box no. 11
Pune

Dr R K Ratho
Professor and Head
Department of Virology
Post Graduate Institute of Medical Education and Research
Chandigarh

Dr Charu Prakash
Additional Director
National Centre for Disease Control
Sham Nath Marg
Delhi

Dr Syed Tanwir Alam
Assistant Professor of Microbiology
Gauhati Medical College
Guwahati
Assam

Dr Chandrashekhar G. Raut
Scientist – E and Officer In-charge
National Institute of Virology
RGICD Premises, near NIMHANS
Someshwarnagar
Bangalore
Karnataka

Indonesia

Mr Subangkit, M. Biomed
Researcher, Center for Biomedical and Basic Health Technology
Institute of Health Research and Development
Jakarta

Ms Rini Desiyantri
Staff
Immunology Installation
National Health laboratory
Jakarta

Dr Dyah Widhiastuti, M. Kes
Head of National Measles Laboratory Surveillance and Epidemiology Department
PT Biofarma
Bandung

Dr Eveline Irawan
Head of Clinical Laboratory and Medical Tests Division
National Health Laboratory
Surabaya

Dr Woro Umi Ratih, M.Kes, SpPK
Technical Manager of Pathology and Immunology
National Health Laboratory
Yogyakarta

Mr Saiful GH, SKM
JFU
National Health Laboratory
Makassar

Mr Joko Miharto, SKM, M.kes
Head of Clinical Laboratory and Medical Tests Division
National Health Laboratory
Palembang

Dr Mursinah
Researcher, Center for Biomedical and Basic Health Technology
Institute of Health, Research and Development
Jakarta

Maldives

Ms Mariyam Sadha
Senior Laboratory Technologist
Indira Gandhi Memorial Hospital
Male

Myanmar

Dr May Wint War
Assistant Director
Public Health Laboratory
Mandalay
# Regional Workshop for Strengthening Capacity and Internal Quality Assurance for the SEAR Measles and Rubella Laboratory Network

<table>
<thead>
<tr>
<th>Country</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dr Ommar Swe Tin</strong>&lt;br&gt;Consultant / Microbiologist&lt;br&gt;National Health Laboratory&lt;br&gt;Yangon</td>
<td><strong>Mr Jate Wantang</strong>&lt;br&gt;Medical Technologist, Professional Level&lt;br&gt;Regional Medical Sciences Center 3 Nakhon Sawan</td>
</tr>
<tr>
<td><strong>Nepal</strong>&lt;br&gt;Dr Ratna Baral&lt;br&gt;Associate Professor (Microbiologist)&lt;br&gt;B P Koirala Institute of Health Sciences&lt;br&gt;Dharan</td>
<td><strong>Mr Worawat Dangsagul</strong>&lt;br&gt;Medical Scientist, Practitioner Level&lt;br&gt;Regional Medical Sciences Center 5, Samut Songkram</td>
</tr>
<tr>
<td>Ms Jyoti Acharya&lt;br&gt;Microbiologist&lt;br&gt;National Public Health laboratory&lt;br&gt;Department of Health Services&lt;br&gt;Kathmandu</td>
<td><strong>Ms Wanvisa Neadruengsang</strong>&lt;br&gt;Medical Technologist, Practitioner Level&lt;br&gt;Regional Medical Sciences Center 6 Chonburi</td>
</tr>
<tr>
<td><strong>Sri Lanka</strong>&lt;br&gt;Dr Sunethra Gunasena&lt;br&gt;Consultant Virologist&lt;br&gt;Medical Research Institute&lt;br&gt;Colombo</td>
<td><strong>Mrs Sutudsanee Vimolsarte</strong>&lt;br&gt;Medical Technologist&lt;br&gt;Senior Professional Level&lt;br&gt;Regional Medical Sciences Center 7 Khonkaen</td>
</tr>
<tr>
<td><strong>Thailand</strong>&lt;br&gt;Mr Athiwat Primsirikunawut&lt;br&gt;Medical Scientist, Professional Level&lt;br&gt;National Institute of Health&lt;br&gt;Nonthaburi</td>
<td><strong>Mrs Boonnipa Suwannakan</strong>&lt;br&gt;Medical Technologist&lt;br&gt;Senior Professional Level&lt;br&gt;Regional Medical Sciences Center 8 Udon Thani</td>
</tr>
<tr>
<td>Ms Punnarai Veeraseatakul&lt;br&gt;Medical Technologist, Professional Level&lt;br&gt;Regional Medical Sciences Center 1, Chiang Mai</td>
<td><strong>Ms Boonyaorn Yuttayong</strong>&lt;br&gt;Medical Technologist, Professional Level&lt;br&gt;Regional Medical Sciences Center 9 Nakhonratchasima</td>
</tr>
<tr>
<td>Ms Amara Yowang&lt;br&gt;Medical Scientist&lt;br&gt;Senior Professional Level&lt;br&gt;Regional Medical Sciences Center 1/1 Chiang Rai</td>
<td><strong>Mrs Wipavadee Jiarakul</strong>&lt;br&gt;Medical Technologist, Professional Level&lt;br&gt;Regional Medical Sciences Center 10 Ubon Ratchathaya</td>
</tr>
<tr>
<td>Ms Porntip Luppanakul&lt;br&gt;Medical Technologist&lt;br&gt;Senior Professional Level&lt;br&gt;Regional Medical Sciences Center 2 Phitsanulok</td>
<td><strong>Ms Chutima Sungkhasoot</strong>&lt;br&gt;Medical Science Technician&lt;br&gt;Experienced Level&lt;br&gt;Regional Medical Sciences Center 11 Surat Thani</td>
</tr>
<tr>
<td><strong>Mr Athiwat Primsirikunawut</strong>&lt;br&gt;Medical Scientist, Professional Level&lt;br&gt;National Institute of Health&lt;br&gt;Nonthaburi</td>
<td><strong>Mrs Walailak Ganjanapin</strong>&lt;br&gt;Medical Scientist, Professional Level&lt;br&gt;Regional Medical Sciences Center 12, Songkhla</td>
</tr>
<tr>
<td><strong>Ms Boonyaorn Yuttayong</strong>&lt;br&gt;Medical Technologist, Professional Level&lt;br&gt;Regional Medical Sciences Center 9 Nakhonratchasima</td>
<td><strong>Ms Supaporn Seatan</strong>&lt;br&gt;Medical Technologist, Practitioner Level&lt;br&gt;Regional Medical Sciences Center 12/1 Trang</td>
</tr>
</tbody>
</table>
Regional Workshop for Strengthening Capacity and Internal Quality Assurance for the SEAR Measles and Rubella Laboratory Network

Temporary Advisors
Ms Atchariya Lukebua
Medical Scientist
Head, Measles Regional Reference Laboratory
National Institute of Health
Nonthaburi
Ms Patcha Incomserb
Medical Scientist
Regional Reference Laboratory
National Institute of Health
Nonthaburi
Mr David A. Featherstone
Ex- Global Measles Laboratory Coordinator
WHO/HQ

WHO/HQ
Dr Miguel Norman Mulders
Global Measles Laboratory Coordinator
WHO/HQ

Facilitator
Ms Susie Jane Braniff
National Serology Reference Laboratory
St. Vincent Institute of Medical Research
Australia

CDC
Dr Bettina Bankamp
Acting Measles Team lead
Centers for Disease Control & Prevention
Atlanta
Dr Ludmila Perelygina
Research Microbiologist Rubella Team
Centers for Disease Control & Prevention
Atlanta

Secretariat
Ms Sirima Pattamadilok
Scientist
IVD Unit
WHO/SEARO
Ms Uttara Aggarwal
Technical Officer
IVD Unit
WHO/SEARO
Dr Sudhir Khanal
Technical officer, Measles Elimination
IVD Unit
WHO/SEARO
Mr Tika Ram Sedai
Data Manager
IVD Unit
WHO/SEARO
Dr Aarti Garg
Junior Public Health Professional
IVD Unit
WHO/SEARO
Mr Ravinder Negi
Secretary
IVD Unit
WHO/SEARO
Ms Rinzi Om Dorzi
Administrative Assistant
WHO Country Office, Bhutan

Observers
Mr Tshewang Dorji Tamang
Deputy Chief Programe officer
Vaccine Preventable Diseases Program
Ministry of Health
Mr Sangay Phuntsho
Program Officer
Vaccine Preventable Diseases Program
Ministry of Health
In order to achieve the goal of measles elimination and rubella control by 2020, case-based measles surveillance activities in all countries of South-East Asia Region, World Health Organization, have gained momentum resulting in increasing workload and expectations from Measles and Rubella laboratory network (MR LabNet). Maintenance of highest standards in lab reporting is the backbone of lab supported surveillance for measles elimination.

The workshop at Thimphu, Bhutan during 15–20 August 2016, dwelt on the concepts of quality assurance to enhance capacity of laboratory network. The workshop was an opportunity to establish close collaboration with surveillance team and assess the programmatic need to generate resources for lab supported surveillance. This workshop was a step forward to develop a system for internal quality assurance and support the verification towards progress in measles elimination in SEAR.