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The fifth meeting of the r-GLC was held in Mumbai, India, from 29-31 May 2013 and the Committee reviewed and endorsed the country mission reports on the programmatic management of drug-resistant tuberculosis undertaken during the first half of the year 2014 and extensively discussed issues related to the scale-up and implementation of PMDT in the countries of the Region. The Committee also discussed the next steps in PMDT implementation.

Multidrug-resistant tuberculosis

Report of the fifth meeting of the Regional Advisory Committee (r-GLC SEAR) on MDR-TB, Mumbai, India, 29-31 May 2014
Multidrug-resistant tuberculosis

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**Acronyms**

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<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>CAP</td>
<td>College of American Pathologists</td>
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<tr>
<td>C&amp;DST</td>
<td>culture and drug susceptibility test</td>
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<tr>
<td>DST</td>
<td>drug susceptibility test</td>
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<tr>
<td>FL DST</td>
<td>first-line drug susceptibility test</td>
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<tr>
<td>GF</td>
<td>Global Fund</td>
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<td>GDF</td>
<td>Global Drug Facility</td>
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<tr>
<td>GDI</td>
<td>Global Drug-Resistant Tuberculosis Initiative</td>
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<tr>
<td>MCGM</td>
<td>Municipal Corporation of Greater Mumbai</td>
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<tr>
<td>MDR-TB</td>
<td>multidrug-resistant tuberculosis</td>
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<tr>
<td>MoU</td>
<td>memorandum of understanding</td>
</tr>
<tr>
<td>NABL</td>
<td>National Accreditation Board for Testing and Calibration Laboratories</td>
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<tr>
<td>NFM</td>
<td>new funding model</td>
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<tr>
<td>NSP</td>
<td>national strategic plan</td>
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<td>NTP</td>
<td>national tuberculosis programme</td>
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<td>PMDT</td>
<td>programmatic management of drug-resistant tuberculosis</td>
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<td>PPM</td>
<td>public–private mix</td>
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<td>r-GLC SEAR</td>
<td>regional Green Light Committee</td>
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<td>SLDST</td>
<td>second-line drug susceptibility test</td>
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<td>TWG</td>
<td>technical working group</td>
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<td>WHO</td>
<td>World Health Organization</td>
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1. **Background**

It is estimated that almost half a million people a year develop multidrug-resistant tuberculosis (MDR-TB), a form of tuberculosis that is difficult to treat with standard drugs because of resistance to isoniazid and rifampicin, the first-line drugs of choice. Resolution WHA62.15 adopted by the Sixty-Second World Health Assembly in May 2009 urged Member States to develop and implement long-term plans for tuberculosis including M/XDR-TB prevention and control, in line with the Global Plan to Stop TB 2006–2015. One of the actions taken to implement this resolution was to establish the Green Light Committee Initiative to help countries gain access to high-quality second-line anti-TB drugs, to enable them to provide treatment for people with multidrug-resistant tuberculosis in line with WHO guidelines, the latest scientific evidence and country experiences. In response to the need for scaling up the programmatic management of drug-resistant tuberculosis in the WHO South-East Asia Region, a Regional Advisory Committee on MDR-TB, also known as the regional Green Light Committee (r-GLC SEAR) was established in 2012, which functions as an advisory committee to the WHO Regional Office for South-East Asia, WHO Member States in the South-East Asia Region, as well as donors and partners. (See **Annex 1** for terms of reference of the r-GLC SEAR).

The first and second meetings of the Committee were held in May and December 2012 at the WHO Regional Office for South-East Asia, New Delhi, and the third and fourth meetings in April and November 2013 in Thimphu, Bhutan and Jakarta, Indonesia respectively. During these meetings, the Committee reviewed and endorsed the country mission reports on the programmatic management of drug-resistant tuberculosis (PMDT) undertaken in 2013 and extensively discussed issues related to the scale-up and implementation of PMDT in the countries of the Region. The fifth meeting of the r-GLC SEAR was held in Mumbai, India, from 29–31 May 2014.
2. Objectives

The objectives of the fifth meeting of r-GLC SEAR were as follows:

1) to organize a field visit to provide an opportunity to r-GLC SEAR to review the current progress and further guide on planning scale-up of PMDT in the Municipal Corporation of Greater Mumbai (MCGM);

2) to review the activities planned and progress made based on the recommendations of the fourth meeting of r-GLC SEAR;

3) to share and discuss new technical updates on PMDT; and

4) to set the way forward for the next six months on PMDT scale-up in the countries of the Region.

(See Annex 2 for agenda of the meeting)

3. Opening session

Welcoming the Committee members on behalf of Dr Rajesh Bhatia, Director, Department of Communicable Diseases, WHO Regional Office for South-East Asia, Dr Md Khurshid Alam Hyder, Regional Adviser (Tuberculosis), hoped for fruitful and successful deliberations at the fifth meeting of the Regional Advisory Committee on MDR-TB. (See Annex 3 for list of participants).

Dr Rohit Sarin, Chair, r-GLC SEAR briefly noted the decentralization in the functioning of the GLC mechanism, visits of successful missions to the countries to support PMDT scale-up and highlighted the importance of r-GLC SEAR in the context of the changing global scenario with regard to PMDT prevention, care and control. He also congratulated the Secretariat for ensuring the smooth functioning of r-GLC SEAR, including organization of the regional meetings and country PMDT monitoring missions.
4. **Report of the fourth meeting of r-GLC SEAR and progress made**

The Chair explained the process of development of the report of the fourth meeting including drafting, circulation and finalization. He briefly presented the recommendations of the fourth meeting especially with regards to active country focused support from the r-GLC SEAR committee along with regular follow up of implementation of country PMDT mission recommendations, importance of identifying a center of excellence in MDR-TB clinical management for strengthening of country capacity and updating of MDR-TB expansion plan in the countries based on country epidemiological situation, etc. The committee members discussed the key issues reflected therein. The important development including follow up of implementation of country PMDT mission recommendations and actions taken by the secretariat for establishing regional MDR-TB training center made after the fourth meeting based on the recommendations were highlighted. The Committee formally endorsed the report of the fourth meeting of r-GLC SEAR held in Jakarta, Indonesia, 21–22 November 2013.

Describing the functions of the r-GLC SEAR and the Secretariat, Dr Hyder explained the progress made in relation with each highlighted issue raised at the fourth meeting. He also updated participants of the events that had occurred at the global level in respect of DR-TB including one-year extension of Memorandum of Understanding (MoU) with the Global Fund (GF) on the GLC cost-sharing element mechanism and the first meeting of the Global Drug-resistant TB Initiative (GDI).

An overview of WHO support to coordinate the GF New Funding Model (NFM) process in the countries of the Region and also the status of the process including programme review, EPI-assessment, NSP development/update and support of the concept note development for countries in the Region was provided. The Committee members were also apprised of financial receipts and expenditures of the r-GLC SEAR Secretariat.

The Chair informed the members of the highlights and draft recommendations of the first meeting of GDI. He also provided a brief background of the process of establishment of GDI and the six key strategic priorities and activities to be carried out by it in collaboration with WHO Headquarters:

1) to develop targeted advocacy strategies and resource mobilization for DR-TB management scale-up

2) to facilitate integration and coordination of efforts to align diagnostic services for patients with access to high-quality care;

3) to build global consensus on the management of DR-TB for patient centered care delivery ("care for cure")

4) to promote strategies to facilitate patient access to high-quality DR-TB care, through a long-term, in-country capacity building approach targeting both the public and private sector.

5) to facilitate effective knowledge sharing among partners and harmonize coordination with existing TA mechanisms to ensure quality support to PMDT;

6) to support prioritization of research to generate evidence for PMDT scale-up.

6. **Review of country mission reports**

Mission reports for Indonesia and Myanmar were reviewed and discussed by the Committee and the following recommendations made.

6.1 **Indonesia**

- The Committee reviewed and endorsed, in principle, the report of the Indonesia mission carried out in April 2014 after seeking some clarifications raised by the Consultant.
6.2 Myanmar

- The Committee reviewed the report and advised the national tuberculosis programme to request the Consultant to prioritize recommendations as per the mission reporting format.

- The Committee advised revision of national strategic plan (NSP) in early 2015 based on findings and recommendations from the joint monitoring mission planned in December 2014.

7. Field visit

As per the agenda of the meeting, a field visit was organized on the first day of the meeting to provide an opportunity for Committee members to review the current progress and further guide on planning in scale-up of PMDT in MCGM. Members visited the PD Hinduja Hospital and Medical Research Centre and a drug-resistant TB (DR-TB) centre based at Pandit Madan Mohan Malviya Hospital, Govandi – a slum in the eastern suburbs of Mumbai to interact with patients and providers from public and private sectors.

The Committee members appreciated the innovative public–private mix mechanisms (PPM) for successful implementation of DR-TB services and recommended that the success stories from Mumbai be shared with other countries in the Region. (See Annex 4 for success stories from Mumbai).

An overview of the Mumbai PMDT laboratory network at the PD Hinduja Hospital and Research Centre along with contributions from the public and private sector was presented. Some findings regarding the experience of using phenotypic as well as molecular laboratory tests for MDR/XDR TB diagnosis linked to the clinical significance of the laboratory results for DR-TB were also discussed. Experiences in the laboratory, including discrepancy between in vivo and in vitro results of drug susceptibility test (DST) of the DR-TB patients, potential for using specific mutations to predict the resistance levels and use of newer tests for determining resistance were discussed. In response to a query regarding the biosafety level for TB laboratory, it was felt that while BSL3 is ideal, keeping in view the cost implications for building BSL 3, BSL 2+ was the best option.
All the Committee members commended the successful engagement of the private sector medical practitioners in the PMDT and opined that documentation on success stories on DR-TB programme using a PPM approach might be useful for other country programmes to identify a PPM model for PMDT appropriate to local context. Myanmar faced many challenges in implementing the PMDT programme. The r-GLC SEAR Secretariat and RNTCP India were requested to support organization of a study tour for programme officials from Myanmar to observe the PPM models functioning successfully in PD Hinduja Hospital and MCGM. It was noted that Bhutan had also requested organization of a similar study tour earlier. During the discussion, the need for country capacity-building and experience-sharing were emphasized. The Committee also stressed the importance of laboratory quality management and clinical management of DR-TB in view of the ongoing scale-up of PMDT services by countries in the Region.

**Recommendations:**

- The Committee appreciated the initiatives taken by MCGM to address the challenge of DR-TB.
- The Committee acknowledged the usefulness of the field visit in connection with subsequent discussions on the issues faced in the countries and recommended inclusion of field visit in the agenda for future meetings of r-GLC SEAR.
- The Committee advocated that the r-GLC SEAR Secretariat should invite agenda items including good practices on country-specific issues to be discussed during the meeting from the members and WHO country office focal points one month before the next meeting to ensure country issues-driven support from the r-GLC SEAR.
- The Committee directed the r-GLC SEAR Secretariat to facilitate a study tour for programme officials from the Member States to share good practices and experiences.
- The Committee recommended that initiatives for capacity-building on laboratory quality management and clinical management of DR-TB be undertaken with support from the r-GLC SEAR Secretariat and regional and country level GF grants.
8. **Major country issues and challenges**

Major country issues and challenges faced in the countries, such as PMDT expansion plan, laboratory capacity, human resources and second-line drugs management were mentioned. During the discussion, the following specific issues were identified:

- donor-driven targets, availability of funds and SLDs;
- sub-optimal laboratory capacity, especially in Bangladesh, Bhutan, Democratic People's Republic of Korea, Indonesia, Myanmar, Nepal, Sri Lanka, and Timor-Leste;
- need for additional human resources and funds for capacity-building;
- delay in drug supply by the Global Drug Facility (GDF); and
- expiry of drugs/surplus drugs.

After extensive discussions, the Committee made the following recommendations.

- Technical support should be provided to the Member States for development of the PMDT expansion plan.
- Capacity-building of human resources on clinical management of DR-TB and laboratory quality management should be facilitated.
- r-GLC SEAR Secretariat should coordinate with the regional GDF focal point to resolve issues related to drug supply by GDF.
- Member countries should review the human resource requirement based on actual workload and prepare human resource succession plans.
- r-GLC SEAR Secretariat should provide need-based support for development and review of the GF NFM concept note pertaining to PMDT.
- Additional support beyond missions should be provided to the countries, such as for stakeholder coordination, capacity-building, research, and advocacy.
9. Strengthening the involvement of all care providers for PMDT scale-up

The Committee members were informed of various recent global and regional efforts to promote PPM for TB care and control including PMDT. The fact that the South-East Asia Region missed almost a third of the three million TB cases missed globally was highlighted and the contribution of PPM to TB case notification in the countries of the Region presented as per the Global TB Report 2013. Various approaches and models being used in the Region and guidance and tools developed by WHO for PPM were explained. In parallel with strengthened collaborative approaches, it was emphasized that strong regulatory measures should be taken by the countries. Strategic action points needed for PPM scale-up were described. Observations and recommendations of the meeting of the SEAR TB Technical Working Group held in April 2014 were presented to the Committee members for their information. The TWG recommended especially strengthening of NTP’s capacity to address engagement of diverse care providers including private providers using innovative approaches. The TWG also emphasized a need of strong advocacy for systematic scale up of PPM interventions in the national strategic plans and concept notes for the Global Fund.

10. Capacity-building for PMDT

A summary of the training of trainers workshop for PMDT held in New Delhi, India, 18–27 March 2014 in collaboration with WHO Headquarters and the US Centers for Diseases Control, Atlanta, USA. After elaborating on the aims, goals, objectives and modalities and target audiences of the training, the next steps for capacity-building for PMDT in the Region were elucidated. Assessment of the country needs for PMDT training and development of the training modules were emphasized. Establishment of centres of excellence on PMDT at the regional and country levels were noted and discussed. It was noted that country plans for resource mobilization for capacity-building were important and accordingly should be budgeted in the national strategic plans and included in the resource mobilization efforts to be incorporated in the concept note for applying the GF NFM.
**Recommendation**

- r-GLC SEAR secretariat should facilitate the process of establishing centres of excellence for PMDT at the regional and country levels.

11. **Next steps**

The Committee discussed the next steps in terms of the country PMDT monitoring missions in the second half of the year 2014 and the date of the next r-GLC SEAR meeting. The Committee agreed to pay more attention to the high MDR-TB burden countries in terms of provision of technical assistance from the r-GLC SEAR while not weakening support to the small countries. Details of candidates and dates of the missions could be identified through the r-GLC SEAR Secretariat in consultation with WHO country offices and national TB programmes.
Annex 1

Agenda

(1) Report of the fourth meeting of rGLC and progress made

(2) Report on the first meeting of the Global Drug-resistant TB Initiative (GDI)

(3) Review of country mission reports
   - Indonesia
   - Myanmar

(4) Field visit to PMDT centres in Mumbai
   - P D Hinduja National Hospital and Medical Research Centre
   - Urban Health Centre, Dharavi-CBNAAT facility, Govandi slums

(5) Major country issues and challenges

(6) Strengthening the involvement of all care providers for PMDT scale-up

(7) Capacity-building for PMDT

(8) Next steps
Annex 2

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Annex 3

Success stories from the field visit

PD Hinduja Hospital and Medical Research Centre, Mumbai

One of the pioneer laboratories in the city of Mumbai has been performing conventional culture and DST for Mycobacterium TB for almost two decades now. The laboratory has an excellent reputation with great emphasis on quality assurance, and serves as a referral laboratory for the city of Mumbai with referrals from many private / public organizations across India. The DR TB services were initiated in the state of Maharashtra in 2007, but due to limited laboratory capacity, the services were not expanded to Mumbai. PD Hinduja was the only laboratory with CAP and NABL accreditation in the city and was approached by NTP for procuring culture and DST services (C&DST) for patients in the public sector. The laboratory cleared the proficiency testing and was accredited for first line C&DST by the National Reference Laboratory. A PPM scheme for culture and drug sensitivity testing was formulated for the first time under NTP and MoU was signed in 2009. This paved the way for other laboratories to collaborate with NTP and now there are three more private laboratories certified for FL DST in the city.

Already existing sputum collection and transport scheme for NGOs were modified to suit the needs of C&DST. With the help of an NGO, a network of more than 30 collection centres was formed, with a twice-weekly collection and transport of sputum to the laboratory within six hours of collection. The laboratory now receives >30 000 samples for culture per year and >20% of its workload comes from NTP.

The laboratory which was recently certified for second line anti-TB DST (SL-DST) is the only such private laboratory in the country and shall be a cornerstone for rolling out baseline SL-DST in the city.
**DR TB Centre (OPD) basis at Govandi - A slum in the eastern suburbs of Mumbai**

Mumbai with a population of 129 million and population density of >20 000 /km² is the most populous and densely populated city of India. The city diagnoses >2500 MDR-TB patients annually. The city initiated services for drug-resistant TB (DR-TB) in 2010 and completed scale-up by 2011. India has a centralized model of DR-TB care with a DR-TB centre for every 10 million population to initiate the DR-TB patient regimen and after seven days of hospitalization, the patient is referred for ambulatory treatment. Mumbai, like other urban areas in the country, has a health system which does not have essential infrastructure and expertise dispersed across the city. Moreover the centralized model had issues of patient delays, system delays, long wait lists and stigma, as well-known TB hospitals only served as DR-TB centres, and nosocomial DR-TB infections due to overburdened facilities and local providers are not oriented towards DR-TB care and support.

The DR-TB services were decentralized with the following interventions:

- enhanced public–private mix
- insourcing of clinical expertise
- linkages of infrastructure available in one district with expertise available in the other
- outsourcing of treatment services
- co-location of rapid diagnostics and DR-TB treatment services
- supervision of all types of DR-TB facilities

The r-GLC SEAR visited the Pandit Madan Mohan Malviya Hospital, Govandi in the eastern suburbs of Mumbai, which serves one of the biggest slums in the city. The hospital is a tertiary care centre, but lacks a pulmonologist. A Genexpert was installed at the facility in month of March 2013.

Dr Vikas Oswal, a chest physician doing private practice in the Govandi area, who was sensitized about the DR-TB services during a CME session, approached the City TB Officer, Mumbai and offered to serve the
DR-TB patients in collaboration with NTP. With the commitment of the Public Health Department of the Municipal Corporation of Greater Mumbai (MCGM) to improve DR-TB services in city, a proposal was submitted to the NTP for insourcing of the private practitioners’ services at the government health facility to provide decentralized DR-TB services in the slum. NTP approved the proposal and a DR-TB centre on OPD basis (weekly) was started in August 2013.

Since then, more than 270 DR-TB patients have been initiated on treatment at the facility on ambulatory basis. The initial responses show a tremendous decrease in unfavourable progress as only nine out of 270 DR patients have died or defaulted till date. The diagnostic delay and treatment delays have come down, as the facility has a GeneXpert and DR-TB centre co-located at the facility.

The private practitioner is available at his clinic the rest of the time and patients initiated at the government facility are allowed to visit him at his private facility for side effects and adverse drug reactions. Patients requiring hospitalization are referred to fully fledged DR-TB centres at GTB Hospital, Sewree.
In response to the need for scaling up the programmatic management of drug-resistant tuberculosis (PMDT) in the WHO South-East Asia Region, a Regional Advisory Committee on MDR-TB, also known as the regional Green Light Committee (r-GLC) was established in May 2012, which functions as an advisory committee to the WHO Regional Office for South-East Asia, WHO Member States in the South-East Asia Region, as well as donors and partners.

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