**The 19th Informal Consultation of the Global Polio Laboratory Network**
**27-28 June 2013, WHO Headquarters, Geneva, Switzerland**

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# Draft recommendations

The World Health Organization convenes an annual informal consultation with participants representing six geographical regions and 20 percent of the 146 member laboratories of the Global Polio laboratory Network (GPLN). Focussed discussions are held on laboratory issues of relevance to the Polio Eradication Initiative (PEI) and policies and technical priorities are established to ensure that the network operates with accuracy and efficiency to confirm the locations in which Polio Viruses (PVs) are transmitted. In the light of the recent adoption of the Polio Eradication Endgame and Strategic Plan (PEESP) one of the main task for the GPLN is to ensure that laboratory procedures and work practices are in line with the PEESP to better inform and orient the Programme where and when need be.

## Recommendations

The Consultation concluded that the GPLN operates with high efficiency. A wide range of projects aimed at improving testing efficiency, including in environmental samples, quality assurance and biosafety are on track. The following recommendations were made.

1. **Securing resources for the GPLN**:
   - Regional Laboratory Coordinators should identify areas where there is a funding gap, evaluate the latter and communicate to WHO HQ in order to allow proper annual budgeting to support upcoming activities that will be conducted in the context of the implementation of the (PEESP).
   - This opportunity should be taken to look at synergistic actions between regions (e.g sharing workplans, training workshops, etc).

2. **Detection and molecular epidemiology of WPV and VDPV**
   - Regional Laboratory coordinators are encouraged to continue timely compiling and updating VDPV data from all sources.
   - Laboratories are encouraged to keep characterizing (mapping mutations additional sequencing-other regions-) Sabin viruses such are those with 4-5 or 8-9 nucleotides differences in order to better inform the program regarding the need to revisit the current VDPV definition for type 2, and 1&3 respectively.

**3. Quality assurance**

- Laboratories distributing cells within the Network should evaluate the level of stock of low passage cells and share it with laboratory coordinators in order to determine if there will be a supply problem in the near future.
- Laboratory coordinators should work with NIBSC and ensure that all cell repositories in the different regions are tested for authentication by end of 2013.

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**4. Proficiency testing**

- To be closer to real situation of testing, it is recommended that ITD and VDPV panels be combined for 2014 panels (with new scoring applied).
- CDC should continue to refine the scoring system for the ITD and Sequencing proficiency testing in order to ensure that passing labs are those that didn't miss viruses of programmatic importance i.e NSL and ITD discordant isolates .
- Laboratories that supply Proficiency Test (PT) panels should ensure that pre-advice is given ahead of time in order to allow receiving countries to complete appropriate paperwork.
- Laboratories should be reminded that the timeline for sending out results starts when the panel is received .

**5. Laboratory Accreditation**

- It is recommended that <u>all laboratories</u> within the Network fill the relevant accreditation checklists for each calendar year and share them with Laboratory coordinators by 15 of February.
- WHO HQ should work with Regional Laboratory coordinators to ensure that the laboratories mainly GSL and RRL, but not restricted to them, that have not been visited in the past 3 years are visited as soon as possible but by end of 2014 at the latest.

**6. Improvements in rRT-PCR methods**

- WHO should continue and complete the comprehensive regional-based assessment of cost (including shipping costs) of commercial buffers to be introduced for rRT-PCR assays.
- It is recommended that Regional Laboratory coordinators share the plan and timeline of implementation of the dual-stage rRT-PCR method with CDC and WHO by end of September 2013.

**7. Development and evaluation of new diagnostic approaches and reagents**.

- The concentration method using PVR-coated magnetic beads was evaluated as sufficiently promising to undergo field testing. NIID should communicate to WHO HQ a plan for pilot-testing including needs in HR, biological materials as well as timeline to complete all pilot-tests. All laboratories can volunteer to test the methods on both stools and environmental concentrates.

**8. Assessment of Laboratory capacity for ES**

- Recognizing that the laboratory capacity (staff, equipment, receiving/shipping sewage samples, running costs…) needed for implementing Environmental Surveillance of polioviruses is an important factor for planning implementation/expansion of ES:

GPLN laboratories performing ES are strongly encouraged to share logistical and financial assessment of resources requirements by end of September 2013.
- Resources requirements linked to new algorithm to be implemented

**9. Improvements in efficiency and quality assurance of sewage processing methods for environmental surveillance**

- The GPLN should complete head-to-head comparisons of concentration methods on the same "standardized" sewage samples, by next IC.
- It is recommended that laboratories sequencing isolates from environmental samples give feedback to CDC on experience resolving/sequencing homotypic mixtures.

**10. Revision of Polio Laboratory Manual (PLM) and Accreditation checklists**

- The SWG should continue to work on the PLM in order to make available a draft with comprehensive outlines for each chapter by end of Q3 at the latest. Consolidated version will be more widely distributed for comments and finalized by Q1 2014 at the latest.
- WHO HQ should share the first draft of the revised accreditation checklists with SWG members by 1st of July in order to receive feedback by end of August in order to roll-out field-testing and implementation by 1st January 2014.

**11. Specimen management**

- Recognizing issues linked to storage of stool specimens in GPLN laboratories, it is recommended that the minimum retention time be reduced from 6 months to 4 months as long as all testing has been completed.