Assuring vaccine quality: Overview of Prequalification

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Outline

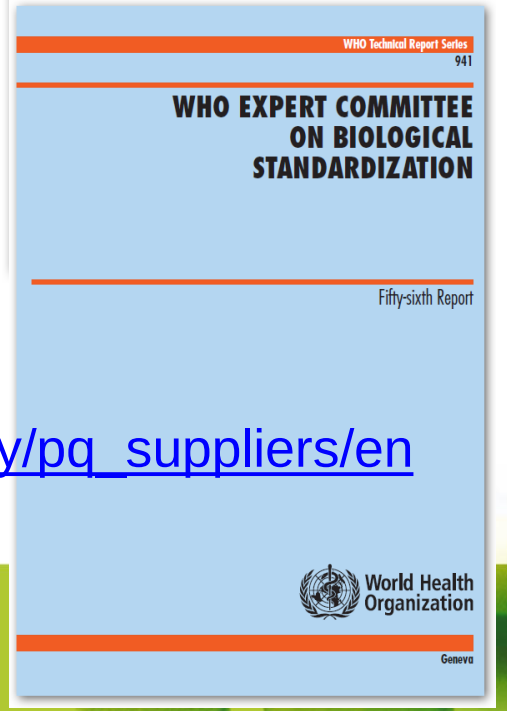
- Overview on Prequalification
- Programmatic suitability for PQ
- Strategic priorities
- Activities to facilitate access of vaccines:
- Polio eradication and end game strategy
- Activities to facilitate license of IPV and bOPV
- Path forward
- Technical assistance and capacity building

Prequalification

- Ensures the quality, efficacy and safety of medicines, vaccines and immunization devices and diagnostics.
- Medicines:
  - Prequalification programme for medicines (finished dosage forms)
  - Prequalification of active pharmaceutical ingredients (APIs)
  - Prequalification of quality control (QC) laboratories
  - expanding access to priority essential medicines: HIV/AIDS, tuberculosis, Malaria, Reproductive Health and some other disease categories (e.g.NTD)
- Vaccines and immunization devices:
  - Ensures that candidate vaccines are suitable for the target population and meet the needs of the programme

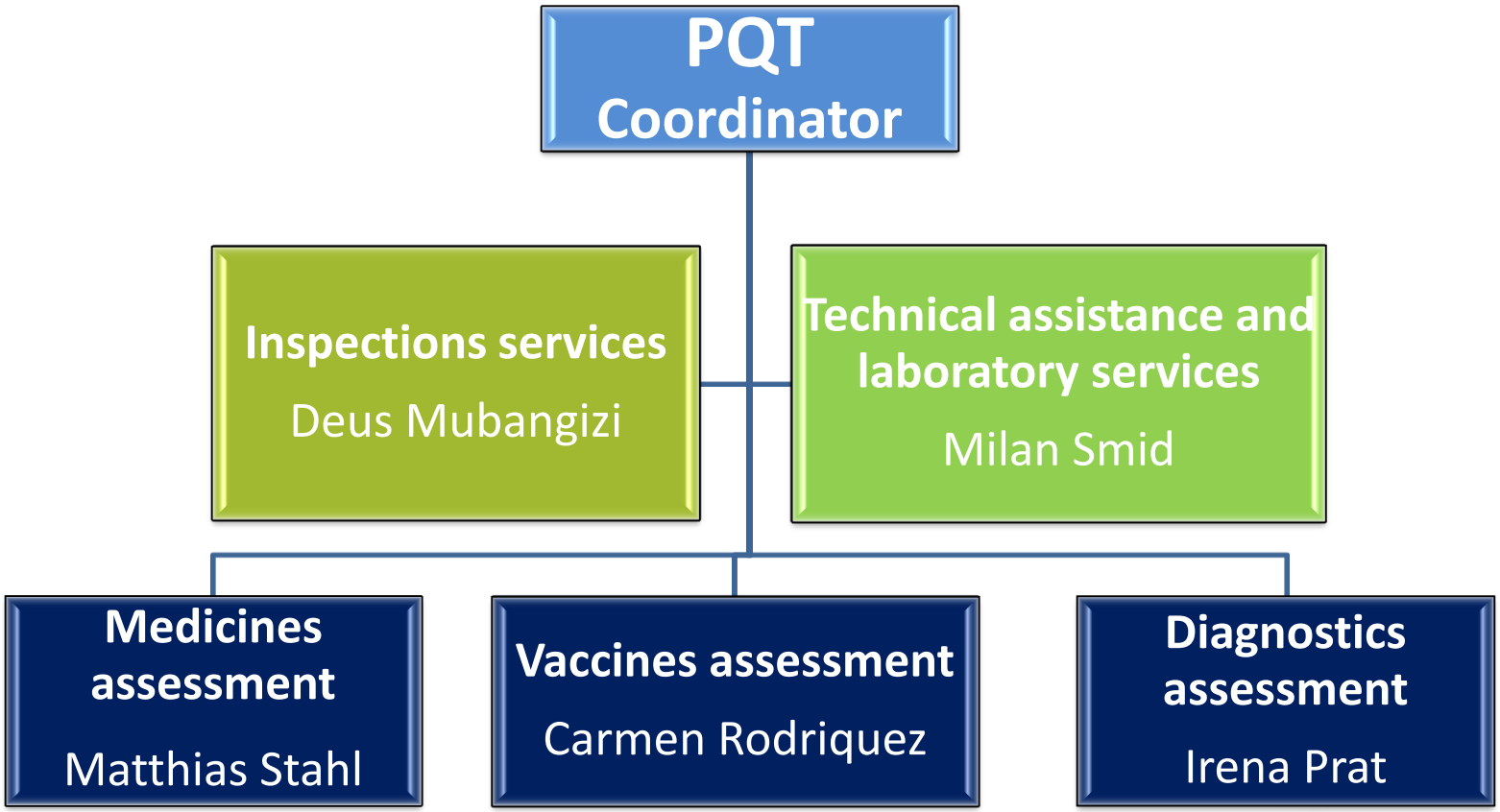
Prequalification is NOT stand alone activity
Many other technical work areas support and link to prequalification (medicines, vaccines, diagnostics and medical devices)

- Outside EMP – Disease oriented departments/programs, IVB Department, Strategic Advisory Group of Experts (SAGE) on Immunization; Regional and Country Offices
- Inside EMP – Norms and standards work/Quality Assurance, Safety/Vigilance, Activities to combat SFFC medical products, NRA strengthening, Policy, Innovation and technology transfer



http://www.who.int/immunization_standards/vaccine_quality/pq_suppliers/en/index.html

New prequalification team: five functional groups



Prequalification

WHO uses the same scientific principles to assess the products safety, quality and efficacy/performance as well-resourced national regulators:

- scientific assessment of documentary evidence for quality, safety and efficacy
- Assessment of suitability for use of the vaccine in the intended settings
- site inspections for GMP, GLP and GCP
- control of variations to products and their manufacturing processes
- post-approval monitoring of quality and safety

Extensive multilayer collaboration: working with regulators … for regulators

- **Not duplicating work done by stringent regulatory authorities**
  - **SRA approval of new and generic products – abridged procedure**
  - **US FDA tentative approvals – based on confidentiality agreement including in the PQ products list**
  - **European Medicines Agency (EMA) – Art 58 … and beyond**
  - **Collaboration with EDQM, in particular in the area of APIs (confidentiality agreements with US FDA, EDQM, EMA …)**

- **Active participation and involvement of**
  - **Regulatory authority experts from well resourced and less resourced settings WORKING TOGETHER for common goal**

Purpose of WHO vaccines prequalification programme

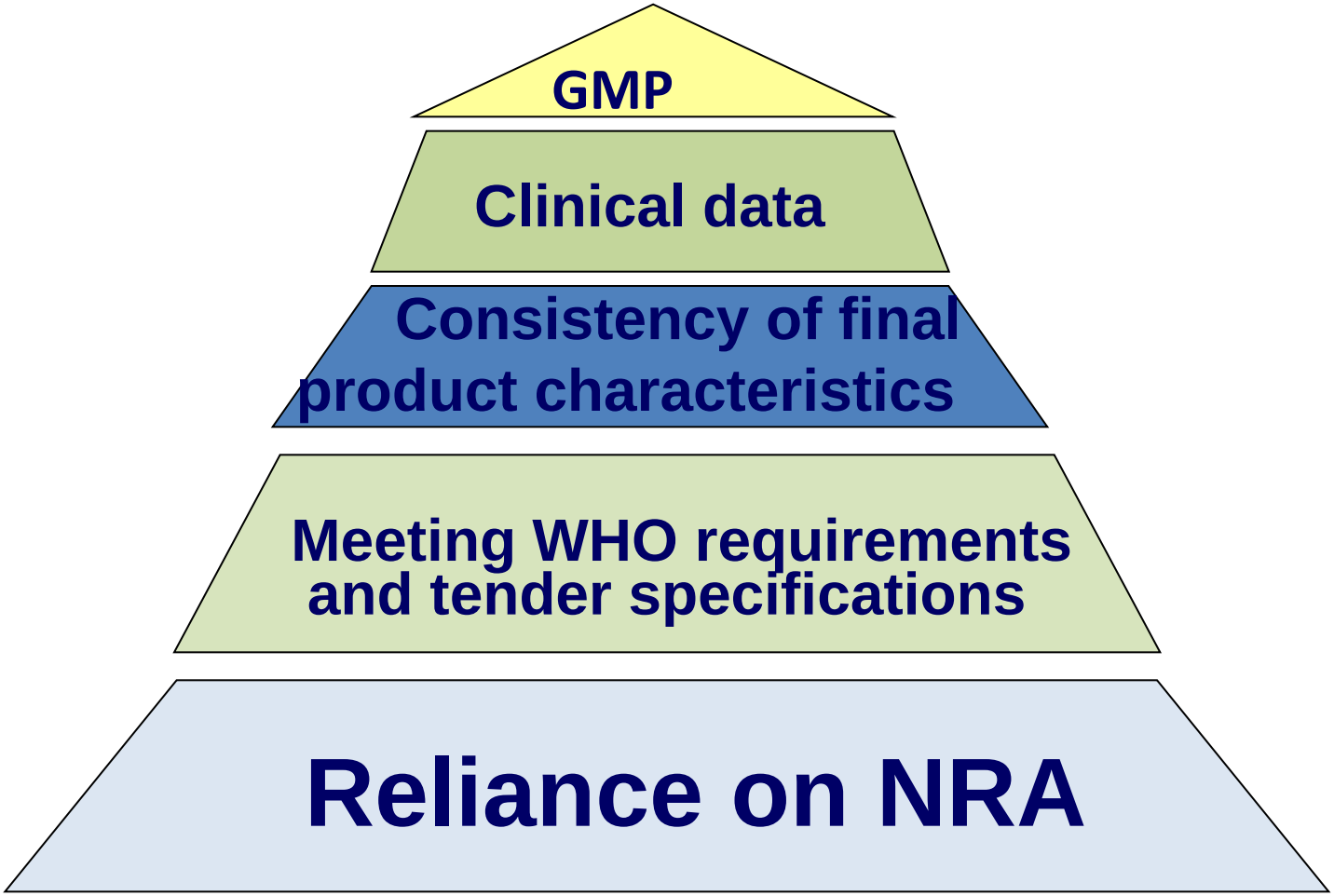
A service provided to UN purchasing agencies.

Provides independent opinion/advice on the quality, safety and efficacy of vaccines for purchase

Ensures that candidate vaccines are suitable for the target population and meet the needs of the programme

Ensures continuing compliance with specifications and established standards of quality

Principles


GMP
Clinical data
Consistency of final product characteristics
Meeting WHO requirements and tender specifications
Reliance on NRA

Pre-conditions for PQ evaluation

Reliance on the National Regulatory Authority (NRA) of the exporting country

- NRA must be assessed as functional as a result of successful evaluation using the WHO NRA assessment tool
- NRA's functional status needs to be sustained over time
- Continued regulatory oversight by NRA is required as well as communication with WHO about potential problems with the vaccine
- Agreements are established with the NRAs for information exchange when a vaccine is about to be prequalified

Pre- conditions for PQ evaluation

- **Vaccine is licensed/registered by the responsible NRA (Scientific opinion by EMA accepted)**
- **WHO guidelines/recommendations approved by the ECBS are available (published in the WHO Technical Report Series)**
- **Listed in the vaccine priority list (low priority vaccines may be postponed depending on workload and no priority vaccines will not be reviewed)**

Prequalification process

- Scientific review of quality dossier
- Scientific review of clinical data
- Testing of samples
- Consultation with responsible NRA
- Site audit to manufacturing facilities

Revised procedure in place from January 2012

Role of NRA during PQ process

As part of the evaluation procedure, consultation with NRA

To discuss regulatory status of the concerned vaccine/s

Clinical performance in country of manufacture if used

Quality evaluation, outcome of recent GMP inspections

Compliance with specifications (trends from lot release data)

Regulatory actions

Informal agreement for information sharing with WHO recorded in Consultation report

Monitoring performance of PQd vaccines

- **Targeted testing by WHO contracted labs: Once a year testing of samples of lots shipped to countries to ensure continuing compliance with specifications**
- **Monitoring and resolution of complaints and reports of AEFIs (with collaboration of the responsible NRA)**
- **Reassessments frequency defined on risk analysis basis**

Why is Vaccines PQ important for user countries and its NRAs?

- It represents a source of vaccines of "assured quality"
- In addition the evaluation is focused on programmatic needs
- WHO follows up on complaints and reports of AEFIs and publishes the outcome of investigations
- WHO monitors the quality of prequalified vaccines on a continuing basis, through testing of samples, reassessment of the products, targeted audits, and delists vaccines if they do not meet the established specifications and/or standard
- Opportunity for NRAs in user countries to save resources to focus on other priorities, since registration can be granted through a facilitated and shortened procedure

Programmatic suitability and its assessment

- **Vaccines produced in developed countries may not have taken into account programmatic challenges in developing countries.**
- **Examples:**
  - **Non auto-disable prefilled syringe presentations**
  - **Stability of components in the event of cold chain breakdown**
- **WHO PQT has always considered programmatic suitability but it was in 2012 that a written guidance (PSPQ) was developed and put in place**

Programmatic suitability

- **Objectives of PSPQ**
  - Judge the programmatic suitability against defined mandatory, critical and preferred characteristics
- **Benefits of PSPQ**
  - Give clear directions to vaccine industry before submission
  - Reduce decision making time

Strategic priorities

Secure the supply base for priority medicines

Facilitate access to quality products for developing countries

Improve efficiency of the prequalification procedure

Expand portfolio according to needs and options for introduction

Supply Security

Monitor closely the performance of prequalified vaccines including FU audits and conducting production capacity assessments

Actively seek for additional sources for priority vaccines

Secure the supply base for priority vaccines for developing countries

Establish risk mitigation strategies in case of failure of NRA

Access

Facilitate access to quality products for developing countries

Single standard of quality (WHO recommended requirements)

Consolidated investigation, reporting and communication in response to quality or safety concerns

Implementation of an expedited/facilitated registration procedure for prequalified vaccines in receiving countries

Mechanisms to minimize wastage of vaccines, facilitate outreach (VVMs, MDVP, CTC)

Mali, polio campaign, Photos: WHO/Olivier Ronveaux

National cold room during the campaign

Contribution development of Controlled Temperature Chain Project Optimize: PATH/WHO

Nicaragua, rotavirus delivery, Photo: Gates Foundation

Transport to health centre

Allow specific vaccines to be kept and administered at ambient temperatures, up to 40ºC

For one, limited period of time immediately preceding administration

For vaccines meeting a number of stability conditions

Current focus: *vaccines administered during campaigns and special strategies: eg Meningo conjugate A, Yellow Fever, Pneumo, Hepatitis B, Rota, Cholera*

Manufacturers

Studies to enable on label use of vaccines under CTC and regulatory submissions

Regulators

Regulatory pathways

Review data for licensing under CTC

WHO

CTC Guidelines(Norms)

Work w/regulators to define Regulatory Pathways and prequalification (vPQ)

Field studies to show programmatic challenges , opportunities and impact of CTC (EPI-IVB)

Accelerated registration of WHO prequalified vaccines

Objective

Assist countries to adopt a facilitated, expedited procedure for the national registration of prequalified vaccines.

Who can benefit

Countries procuring through UN agencies

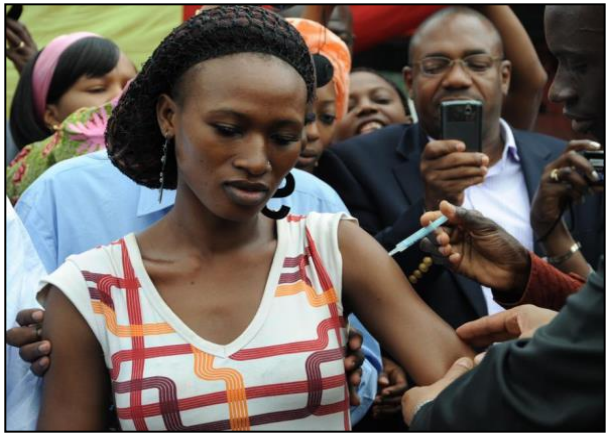
and/or

Countries procuring directly but requiring WHO prequalification as a tender condition

where the national regulations include provisions to shorten the normal regulatory approval process.

Implementation of Procedure for expedited review of imported prequalified vaccines for use in national immunization programmes (WHO/IVB/07.08)

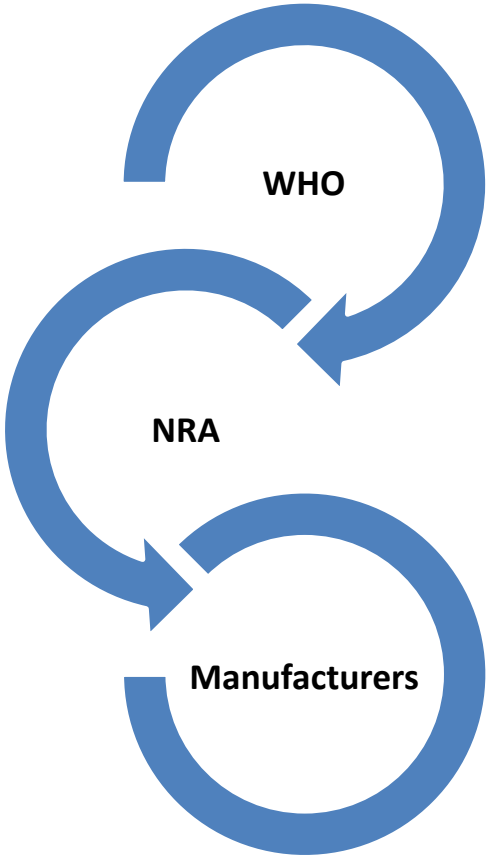
Firstly used for registration of MenAfriVac in 26 countries of the belt



Accelerated national registration of WHO-prequalified pharmaceutical products and vaccines.

Vaccines	Pharmaceuticals
Procedure for expedited review of imported prequalified vaccines for use in national immunization programmes (WHO/IVB/07.08)	Collaborative procedure between the World Health Organization Prequalification of Medicines Programme and national medicines regulatory authorities in the assessment and accelerated national registration of WHO-prequalified pharmaceutical products.
Expert Committee on Biological standardization	Expert Committee on Specifications for Pharmaceutical Preparations
Firstly used for registration of MenAfriVac in 26 countries of the meningitis belt	Procedure in place since 2012 Collaborative agreements signed with 20 National Regulatory authorities 33 procedures finalized Details on www.who.int/prequal

Revision of procedure



Agreement

Facilitated license

Technical assistance and capacity building

Meetings with manufacturers at early stages of vaccine development. Advice on product characteristics and clinical development.

PQ briefing workshops

Support to IFPMA and DCVMN

Support to regulatory networks: DCVRN, AVAREF

Summary

- Prequalification system ensures the quality, efficacy and safety of medicines, vaccines and immunization devices and diagnostics for global use.
- Assessment focused on programmatic needs
- Facilitate access to quality products for developing countries:
  - Control temperature chain
  - Shipping validation
  - Multidose vial policy
- The collaborative registration of PQed medicines is a work-sharing and confidential information sharing mechanism, which already produces results: in 80% of 33 procedures registration was granted in less than 90 days.

Relevant PQ information

http://www.who.int/immunization_standards/vaccine_quality/pq_system/en/

http://www.who.int/immunization_standards/vaccine_quality/pq_suppliers/en/

http://www.who.int/immunization_standards/vaccine_quality/quality_issues/en/

http://www.who.int/immunization_standards/vaccine_quality/pq_revision2010/en/

http://www.who.int/immunization_standards/vaccine_quality/ps_pq/en/

http://www.who.int/immunization_standards/vaccine_quality/expedited_review/en/