Assessment of IVDs for Prequalification

World Health Organization

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PQ of IVDs: aim & scope

Prequalification of IVDs began in 2010

The aim of PQDx is to promote and facilitate access to safe, appropriate and affordable IVDs of good quality

Focus is placed on IVDs for priority diseases and their suitability for use in resource-limited settings

The scope of IVDs eligible for PQ continues to expand

Currently 103 IVDs are prequalified

PQ List available at:
https://extranet.who.int/pqweb/vitro-diagnostics/vitro-diagnostics-lists

- HIV
- Malaria
- Hepatitis C
- Hepatitis B
- HPV
- G6PD
- Cholera
- Syphilis
- Tuberculosis NAT*
- Haemoglobin POC*
- Glucose meters & test strips*

PQ assessment components

A comprehensive assessment of individual IVDs through a standardized procedure aimed at determining if the product meets WHO prequalification requirements

The prequalification assessment process includes three components:

- Review of a product dossier
- Performance evaluation
- Manufacturing site inspection

Labelling review

Review of the product dossier

Assessment of manufacturer's data

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Analyzing the relevance of the data in the dossier

- Quality data that supports the manufacturers claims of quality, safety and performance
- Appropriate & well-designed validation studies

Review of completeness, accuracy and consistency of data over IVD life-cycle

- From initial product design, through validation, manufacture, quality control and release onto the market

➢ Are the technical specifications (TSS) met?

➢ Has the manufacturer considered the use of the product in resource-limited settings?

Technical specifications (TSS)

TSS 1: HIV serology IVD performance – Manufacturer's evidence

Analytical Performance

Includes:

- Detection of genotypes
- Seroconversion sensitivity
- Measuring range
- Precision of measurement
- Potentially interfering substances & cross-reactivity
- Stability
- Flex studies
  - Validation of reading time, operating temperature, specimen volume, etc.

Clinical Performance

Includes:

- Diagnostic sensitivity
  - Minimum 400 HIV-1 specimens
  - Minimum 100 HIV-2 specimens*
  - Minimum 50 p24 Ag specimens*
- Diagnostic specificity
  - Minimum 1000 specimens

❖ At least 2 geographical settings

❖ Variety of intended users

❖ More than 1 manufactured lot

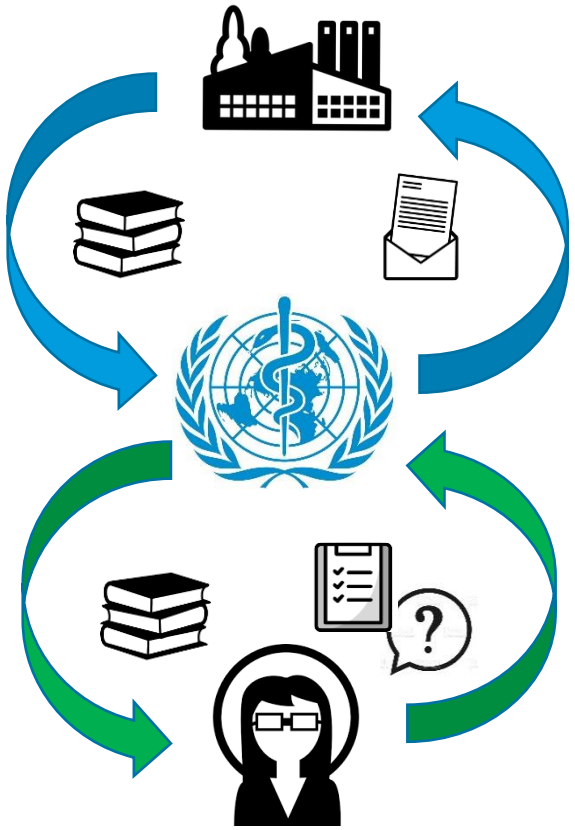
➢ **Usability studies are required for self-tests**

Dossier review process

Coordinated by WHO

- Manufacturer submits dossier to WHO
- Dossier screened for completeness
- Dossier sent to subject matter expert for technical review
- Expert provides completed dossier review checklist and notes any deficiencies in the dossier
- WHO prepares dossier review letter for manufacturer requesting additional information or clarifications

➢ Process repeated with manufacturer's response to the dossier review letter



Performance evaluation

Analytical, clinical and operational performance

Independent **verification** of the performance of IVDs submitted for prequalification assessment

- Assays are challenged with a focus on their use in resource-limited settings and in the context of WHO guidelines
- A standard PQ protocol is followed for the evaluation
  - The dataset obtained complements the verification and validation data submitted by the manufacturer in the product dossier
  - Currently takes place in a WHO Collaborating Centre and/or a designated Performance Evaluation Laboratory (PEL)
  - Specimen panels designed to represent a global population

Manufacturing site inspection

All sites relevant to the IVD are considered

Evidence of a fully implemented quality management system based on International Standards

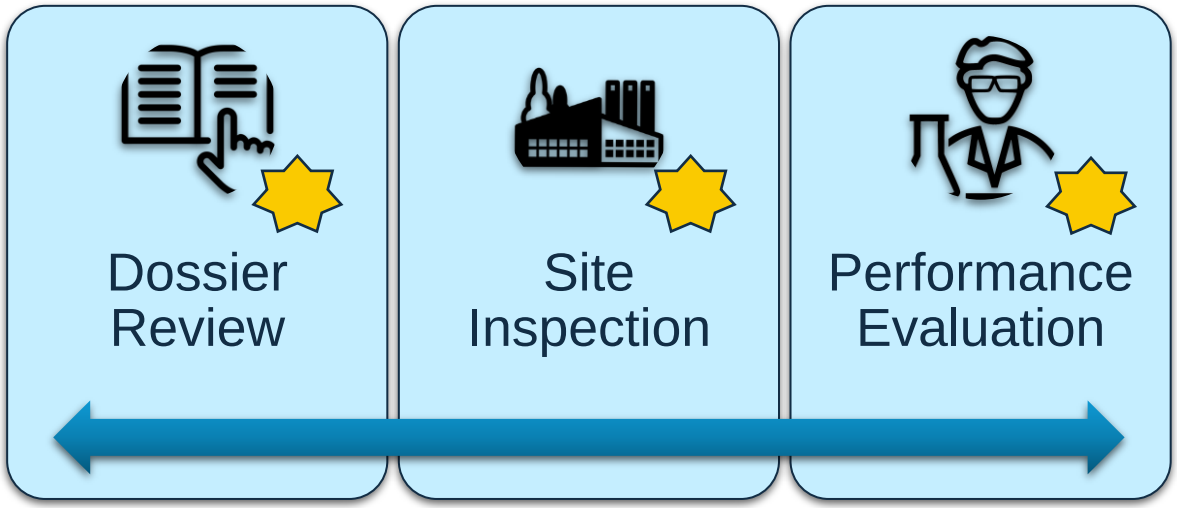
- IVD design & manufacture meets ISO 13485
- Risk management meets ISO 14971

Consideration of the robustness of the product for WHO intended settings and users

- The products undergoing prequalification have to be in routine manufacturing
- Evidence of sufficient capacity to ensure reliable delivery

Prequalification decision

Final prequalification outcome depends on:



- A final labelling review is performed and the public report prepared
- The product is added to the list of WHO prequalified IVDs
  - IVD is eligible for WHO and UN procurement

WHO PQ Reports

Reports generated during IVD assessment

Dossier Review

Assessment of manufacturer's information:

- Product information
- Design and manufacturing
- Product performance specifications
  - Validation and clinical studies
- Labels
- Commercial history
- Regulatory history
- Quality management system

Site Inspection

On-site inspection findings:

- Scope of inspection
  - Objectives
  - Limitations
- Information about the manufacturer
- Inspection findings
  - Audit trails and sources of evidence
  - Evaluation and conclusions
  - List of non-conformities and observations
  - Grading of NCs

Performance Evaluation

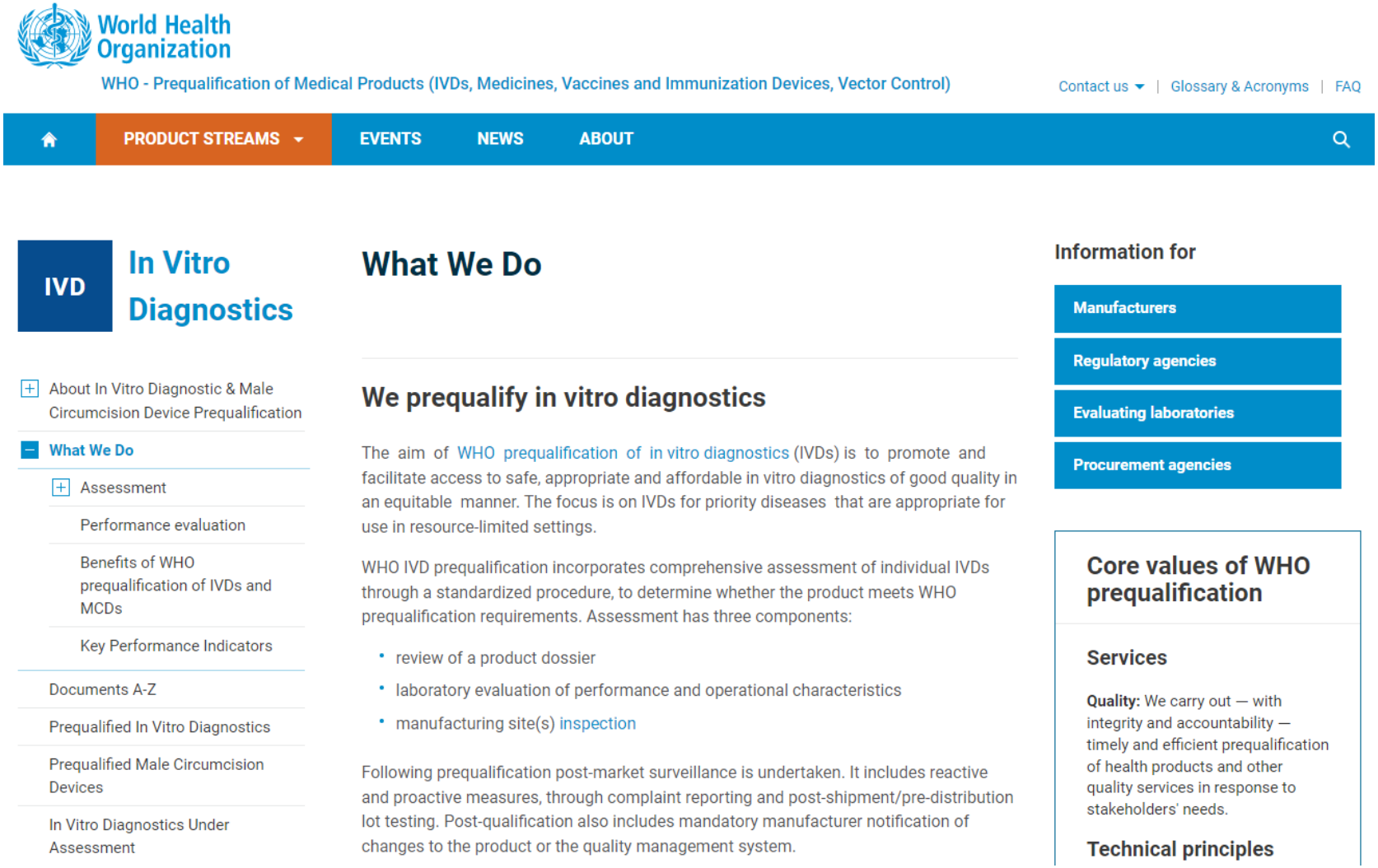
Protocol & data provided:

- Product provided for evaluation
- Specimen panels tested
- Reference results
- Data Analysis
- Results
- Appraisal by laboratory technician
- Appendices containing data generated during the evaluation

+ Reports for approved changes

PQ IVD Website

https://extranet.who.int/pqweb/vitro-diagnostics/vitro-diagnostics-lists



Thank you

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Contact PQ-IVD Team

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