WHO AMR Curriculum Assessment Tool for Medical Education

Strengthening AMR Education for a Competent Global Health Workforce

Regional Workshop on Advancing WOAH AMR Standards in Veterinary Practice: 08 – 10 April 2026

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Presentation outline

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African Region

- The Foundation of AMR Educational Standards
- Goals & Objectives of the Assessment Tool
- Development & Methodology
- Key Elements of the Tool & Structure
- Application: Medical, Veterinary & One Health Education
- Conclusion: Curriculum Review: A Holistic Ecosystem (Not a Standalone)

The Foundation of AMR Educational Standards

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African Region

The Global Framework
(2018–Present)

The Curriculum Assessment Tool

The Foundation of AMR Educational Standards

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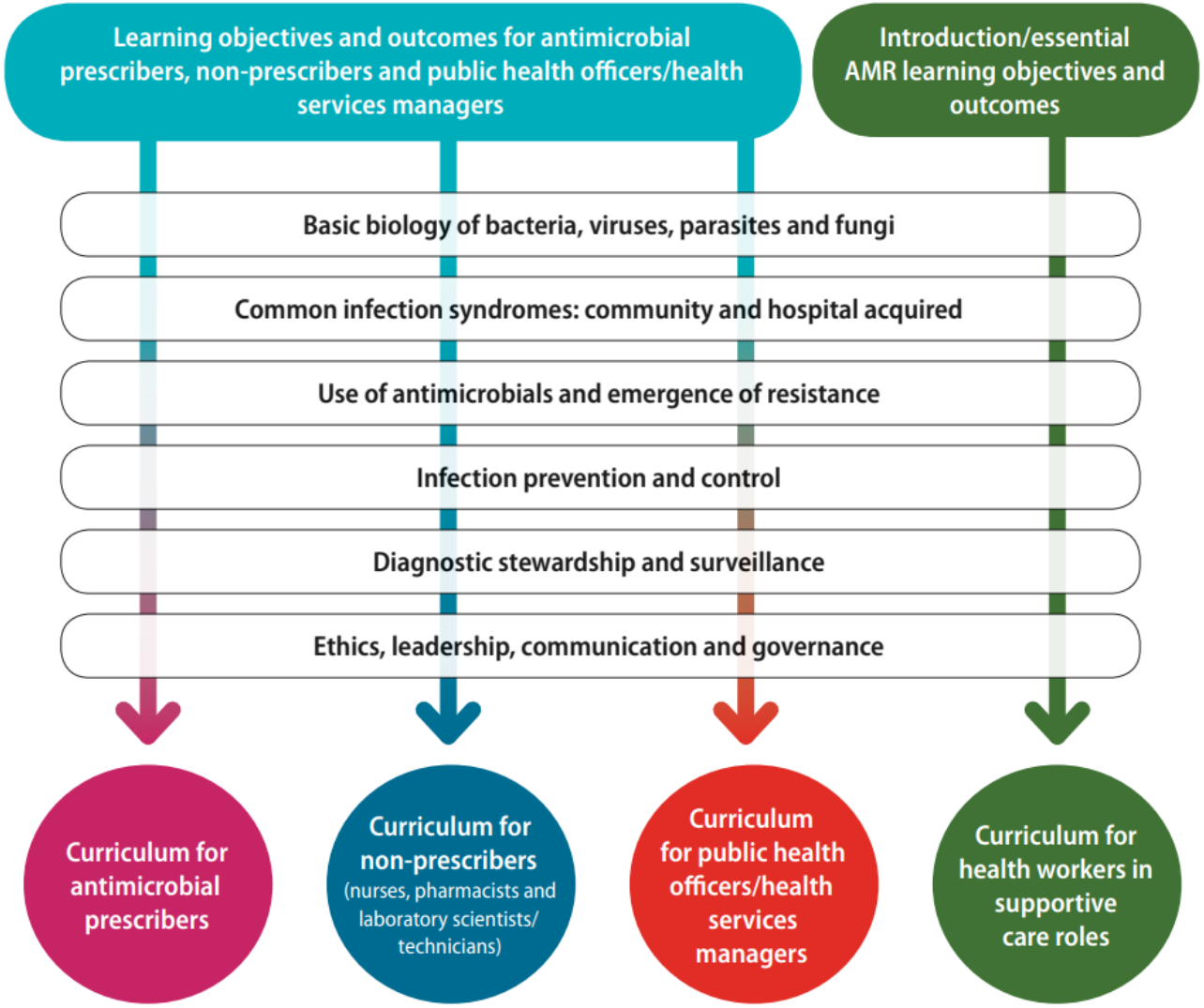
The Global Framework (2018–Present)

- **Global Action Plan on AMR:** Authoritative framework for AMR education. It elevates AMR from a narrow clinical concern to a **universal competency standard**, forming a critical pillar of any effective National AMR Strategy
- **WHO Competency Framework:** Established the core competencies required for health workers to effectively address AMR.
- **AMR Curricula Guide:** Defined the quality standards for both AMR-specific (technical stewardship) and AMR-sensitive (general prevention) training.

The Curriculum Assessment Tool

- **The Missing Link:** Translates global standards into a practical diagnostic for universities and medical schools.
- **Targeted Guidance:** Sets clear institutional expectations for undergraduate medical and health science curricula.
- **Goal:** Ensures that pre-service training produces a workforce equipped for standardized, high-quality AMR clinical practice.

WHO Curricula Guide



- The curricula guide follows a matrix model, combining desired learning objectives with the modular application of respective domains and subdomains in achieving the outlined learning outcomes suitable to audience.
- It gives the structure of the training modules, with specific learning objectives and suggested assessment methods
- Also gives a brief outline of an institutional AMR curricula review, and the methodologies to be used.

Goals & Objectives of the Assessment Tool

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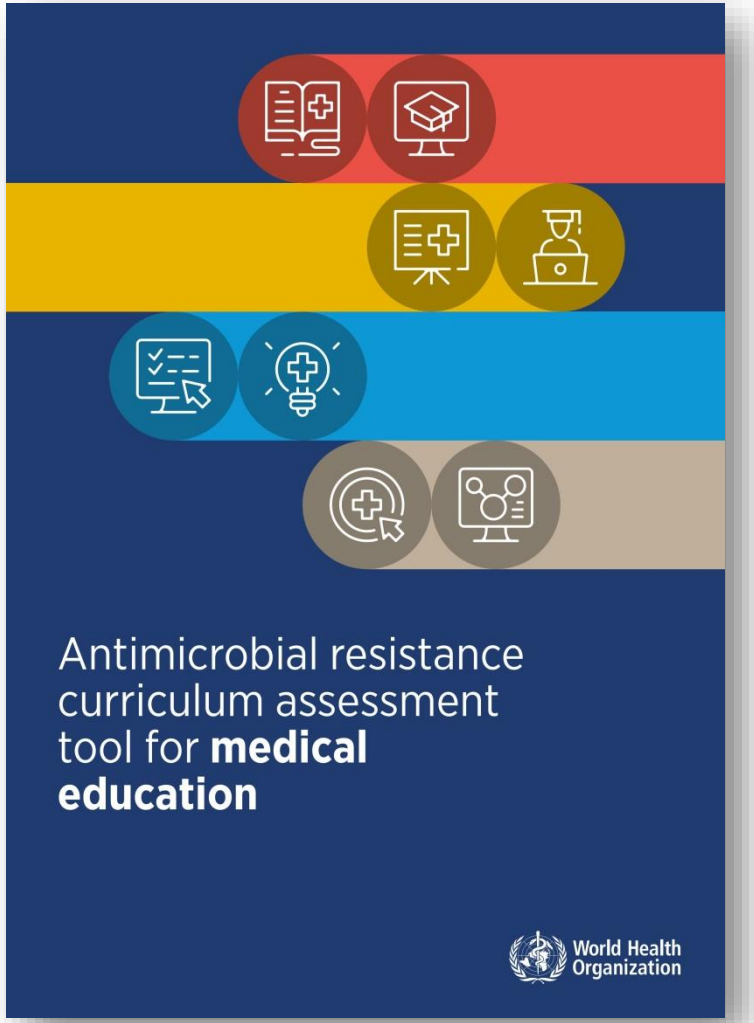
Purpose: Aligning medical education with global AMR standards.

- **Assess Robustness:** Evaluate if curricula meet the *WHO Competency Framework for Health Workers*.
- **Strategic Design:** Guide the review and enhancement of **AMR-specific** and **AMR-sensitive** content.
- **Stakeholder Engagement:** Facilitate structured, periodic dialogue between faculty, national committees, and leadership.
- **National Context:** Enable curriculum mapping at both the university and national levels.



Development & Methodology

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Process: A consensus-based, global standard.

01 Expert Led:

Developed by WHO AMR Division with global experts, educators and clinicians.

02 Framework Aligned:

Built directly upon the 2018 *WHO Competency Framework.*

03 Field Tested:

Piloted across in low-resource settings (Selected Universities in Ethiopia). Jordan was the first country to use it.

04 Evidence-Based:

Designed to identify specific educational gaps through data, not assumptions.

Key Elements of the Tool

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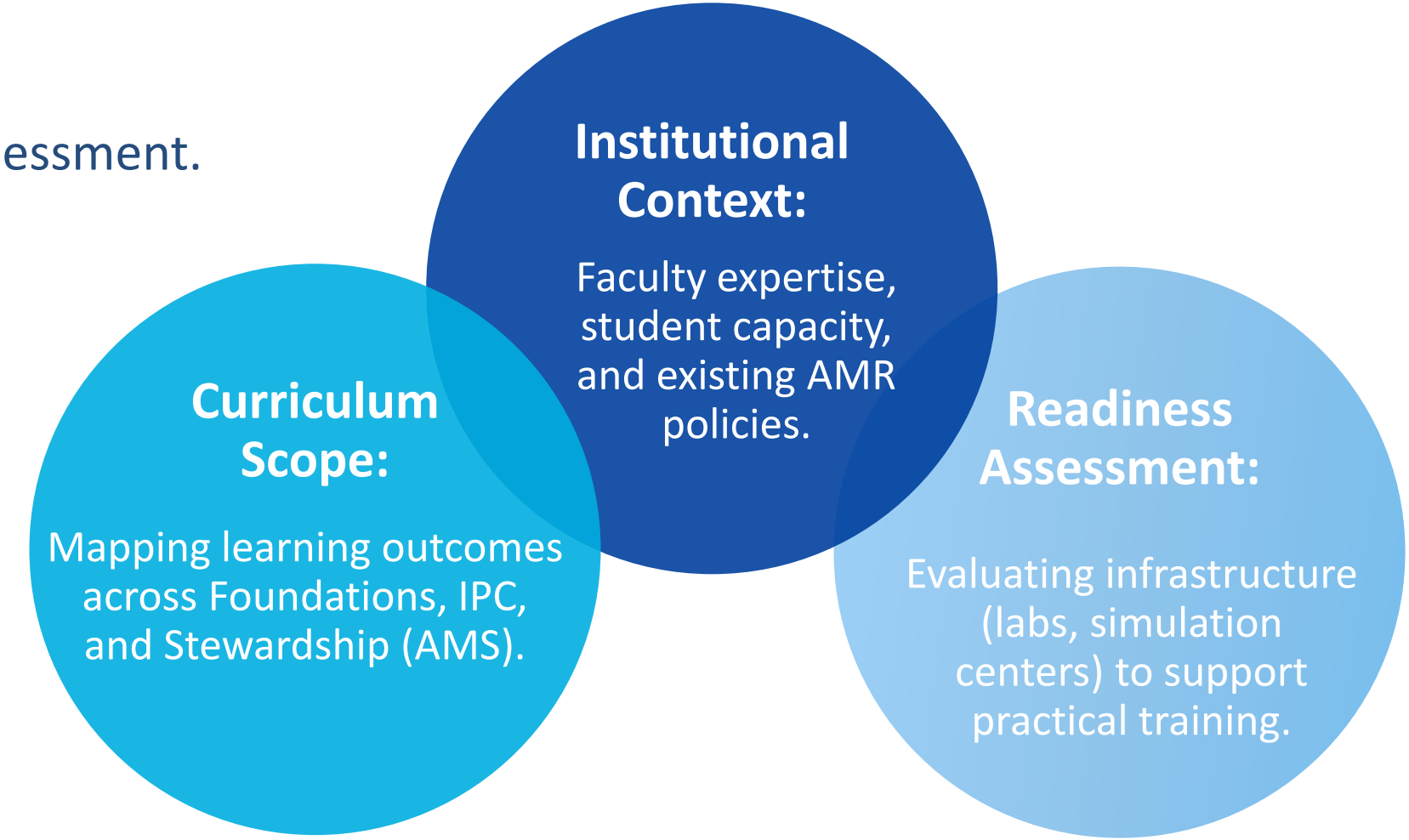
Structure:

A three-part holistic assessment.



Recommended process for assessment

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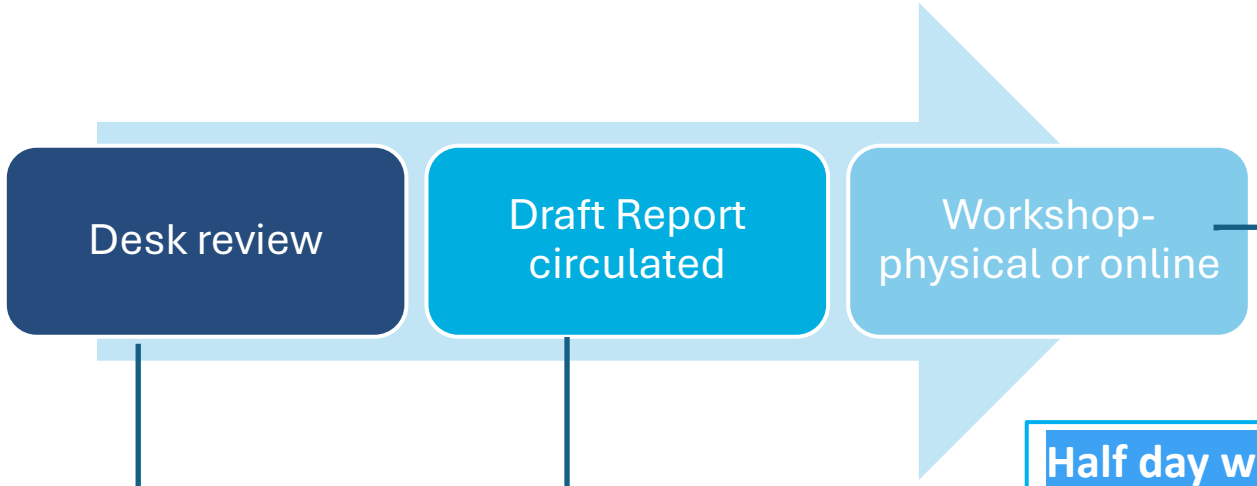

It is suggested that the desk review be led by **an expert in medical education and AMR** with methodological skills

Draft report of the curriculum assessment should be **circulated to the respective departments** before the workshop

Half day workshop with representation from following departments:

Core departments:
- microbiology
- pharmacology
- public health medicine
- internal medicine
- paediatrics
- obstetrics and gynaecology
- general surgery
- family medicine (if available)
- infectious diseases (if available)
- infection prevention and control (if available)
- social medicine (if available)
- critical care medicine
- orthopedics

Optional departments:
- emergency medicine
- medical oncology
- dermatology
- otorhinolaryngology
- ophthalmology

Structure of the assessment tool

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Divided into subjects and departments for ease-of-use

A Well covered | B Covered but needs minor improvement | C Covered but needs major improvement | D Not covered

No.	Theme	Sub-themes	Response	Comments
1	**Microbiology**			
1.1	Basic concepts of microbiology and infection	• General microbiology, including cell structure and Gram staining of common pathogens • General concept of infection and modes of transmission • Basic concepts of immune response • Normal flora, colonization and microbiome	Select item Select item A B C D	
1.2	Mechanisms and epidemiology of AMR	• Introduction to AMR and its impact • Genetic mechanisms of AMR • Modes of transmission of resistance (macro: person-to-person, food-borne, aerosols, body fluids, touch, surfaces; micro: conjugation, transduction, transformation, vertical) • General concept of infection, AMR infection, microbiome, colonization and colonization with drug-resistant microorganisms • Epidemiology of AMR • Importance of surveillance of resistant infections • Common terms such as AMR, multidrug-resistant, methicillin-resistant Staphylococcus aureus, extended-spectrum beta lactamase, carbapenam-resistant		

Likert style responses based on consensus

List of curricular elements under each theme

Structure of the institutional readiness tool

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A Yes, fully in place | B Yes, partial | C Planned | D No, but a priority | E No | F Uncerta

Likert style responses based on consensus

No.	Question	Response
Policies on AMR education and training		
1.1	Is there a mandatory or recommended policy or guidance requirement for all prescribing staff to be trained in AMR?	Select item
1.2	Is there a national, subnational or local strategy or policy on AMR education to which your institution refers?	Select item
1.3	Is there current, evidence-based standard treatment guidance for management of infectious conditions to which your institution refers?	Select item
1.4	Does the institution conduct regular training in AMR, AMS and IPC for different cadres of health-care workers?	Select item

5 different sections and 22 questions looking at infrastructural and functional arrangements

No.	Question	Response
Infrastructure for delivering AMR education and training		
2.1	Does your institution have a functional clinical microbiology laboratory for practical, hands-on training for students?	Select item

Immediately after the assessment

Focus on curricular gaps: Any gaps in the AMR curriculum identified during assessment should be discussed with the relevant departments. Initially, focus on the C and D responses in the curriculum assessment tool

Remedial plan for each department: Each department should be able to make a brief, short-term remedial plan with specific learning objectives and intended learning outcomes to fill the gaps identified during the assessment.

Improving institutional readiness: Some deficiencies identified in the assessment tool for institutional readiness can be remediated through interventions by the management of the institution or university. A list of interventions that could be made without significant investment could be prepared, discussed and submitted to the management.

Application: Medical Education

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Impact: Graduating "AMR-Ready" clinicians and AMR Champions.

- **Prescriber Competency:** Ensuring students master correct antibiotic selection, dosage, and duration
- **Clinical Integration:** Moving AMR training from the lab to the bedside (Medicine, OB/GYN, Surgery, Pediatrics, etc.).
- **Patient Safety:** Embedding Infection Prevention and Control (IPC) as a core clinical duty.

Application: Veterinary & One Health

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Expansion: Addressing the human-animal-environment interface.

Sector Adaptation: Swapping human prescribing for Veterinary Medicinal Products (VMP) and herd-level stewardship.

Zoonotic Link: Addressing AMR transmission through animal husbandry and food systems.

One Health Strategy: Using the tool to bridge gaps between medical and veterinary faculties.

The Funding Catalyst: Data from these assessments creates a compelling, evidence-based case for investment.

Curriculum Review: A Holistic Ecosystem (Not a Standalone)

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Core Principle: Curriculum review is the *"Check"* in a continuous **Plan-Do-Check-Act** cycle. It is ineffective without the context of design and the authority of regulation.

01 The Regulatory Ecosystem

(The Framework)

- ✓ Compliance
- ✓ Benchmarking

02 The Development Workflow

(The Blueprint)

- ✓ Intentional Design
- ✓ Constructive Alignment

03 The Review & QA Cycle

(The Pulse)

- ✓ Closing the Loop
- ✓ Evidence-Based

04 Challenges & Unique Features

(The Context)

- ✓ Adaptability
- ✓ Resource Integration