Addressing Waste Management of Pharmaceuticals

Updates on WHO guidance and activities

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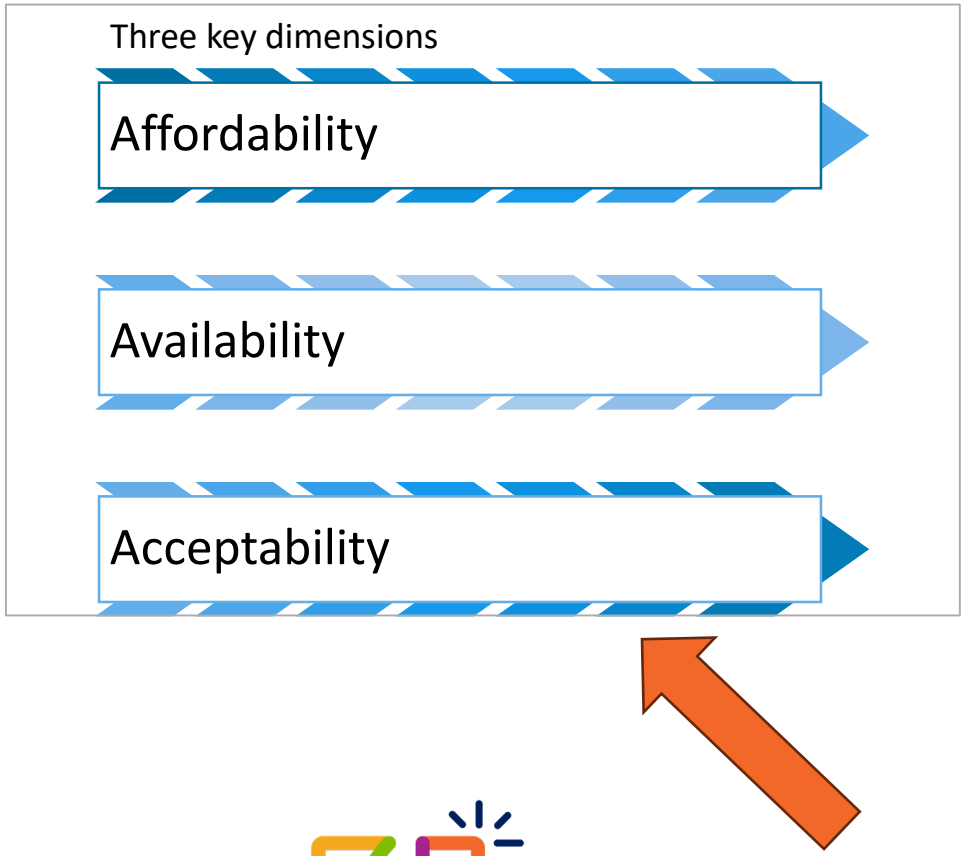
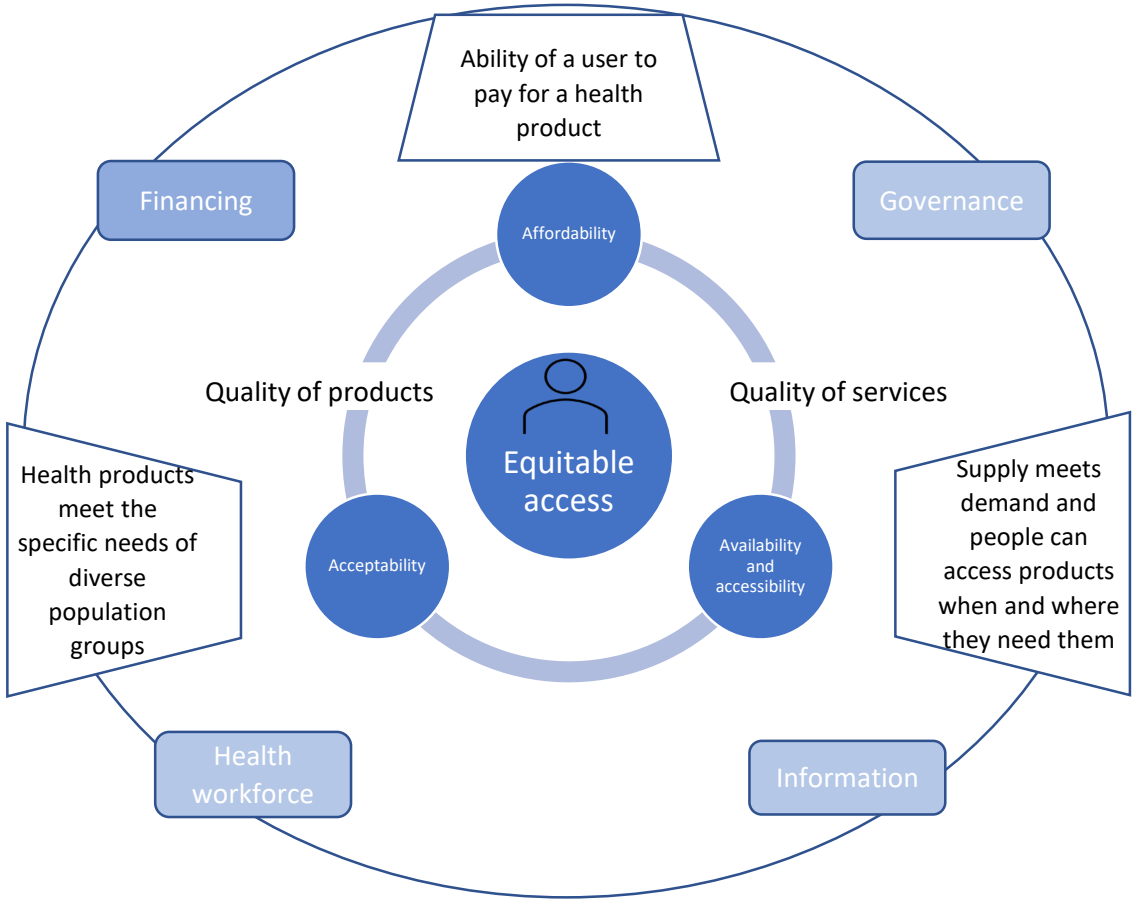
Topics:

- Waste management as part of access to medicines
- Policies, in development and actually available
- Promising future areas

WHO Roadmap for Access to Medicines, Vaccines and Other Health Products 2025-2030: update in progress





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- More than 300 million tons of plastic waste are produced annually in the pharmaceutical sector.

- In recent surveys, around 60% of health care facilities had waste management policies and practices in place.

- Unused pharmaceuticals are a small proportion of total health care waste at facility levels (from 3-5%) but are often disposed of in ways that create unnecessary exposure to people and animals.

Guidance from WHO under revision

- Existing guidance from 2014
- "Best practices" update under development on pharmaceutical waste generated from consumption at health facilities.
- Identifies best practices as well as gaps and opportunities for national policies.
- Not in scope: manufacturing waste, sharps and devices, bio-hazard and infectious waste.
- Specialized products to be addressed separately, e.g., insecticide treated bed nets and diagnostic rapid-diagnostic tests.

https://iris.who.int/bitstream/handle/10665/85349/9789241548564_eng.pdf?sequence=1

Key findings of a systematic review: HCWM policies

- Policies mainly represent middle- to high-income countries.
- Focus in LMIC was mainly on household management of pharm waste.
- Evidence of lack of awareness of policies in HCW and communities.
- Prevention strategies not as prevalent as disposal policies.
- Policies influencing choices at the procurement level are mainly in HICs.
- Unclear resources to define hazardous, general, controlled pharmaceuticals.

Systematic review: Technology Gaps

Photo by Katie Rodriguez on Unsplash

Open burning and low-temperature incineration: over reliance, especially at lower levels

Engineered sanitary landfills: feasibility is limited in some settings

Transport: Insufficient systems to move volumes of waste

Availability of clear protocols and safe containment for transporting immobilized or “inertized” ash residue waste to landfill

Labeling: Unclear disposal information

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Slide courtesy of Nancy Muller

Future directions for discussion

- **Resources on global best practices** may be useful to share experiences on pharmaceutical waste management.
- **Creative reimagining of waste as part of the circular economy** and not just an end-of-pipe disposal exercise
- **Explore systems innovation such as** barcoding, artificial intelligence, and machine learning can predict and prevent wast.
- **Expand innovative options** for reverse logistic to prevent waste and to transform waste

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Thank you!

- Technology, including systems approaches are major contributors to the development of policy.
- Comments on upcoming WHO documents in 2025
- Case studies and best practices will continue

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