

Operationalising AWaRe antibiotic prescribing quality indicators using existing antimicrobial use surveillance data

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Background

- AWaRe QIs are metrics evaluating antibiotic prescribing appropriateness, grounded in WHO AWaRe antibiotic book
- AMU systems capture the data needed for QI computation, yet doing so manually still an excessive workload for AMS teams
- We evaluated major AMU platforms (Global-PPS, WHO PPS, NAPS) to identify which data structure could best support automated QI computation
- Global-PPS was selected for its unique dual inpatient/outpatient coverage and standardised Excel exports, enabling us to **develop R Shiny dashboards** that transforms surveillance data into real-time stewardship triggers

Objective: We present the design, analytical framework, and illustrative demonstration of an automated AWaRe QI dashboards built on Global-PPS data

Material and Methods

Delphi & RAND/UCLA

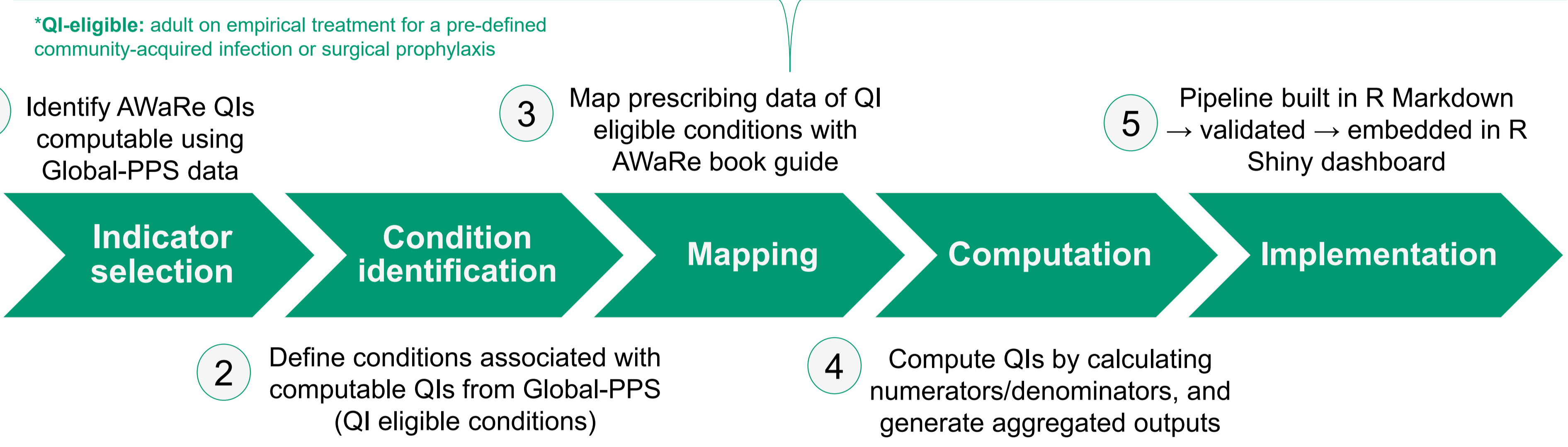
Final list of the QIs voted on appropriateness and feasibility of implementation

Global PPS

Dummy / template dataset matches the output format of Global-PPS (Excel)

AWaRe Book

Identify scenarios (Dx / Rx) that align with AWaRe book for each relevant indicator



Results

38 QIs compatible with Global-PPS:

- 17 Inpatient QIs:** Sepsis, meningitis, pneumonia, intra-abdominal infections, upper UTI, SSTI/osteoarthritis infections, surgical prophylaxis
- 21 Outpatient QIs:** Respiratory tract, ENT, dental, diarrhoea, lymph node, mild SSTI, lower UTI

AWaRe QIs include:

- Proportion of patients with specific condition given **IV / oral** antibiotics
- Proportion of patients with specific condition given **Access / Watch** antibiotics
- Proportion of patients with specific condition given **appropriate antibiotic choice / dosage / duration (outpatient)** per the AWaRe book guidance

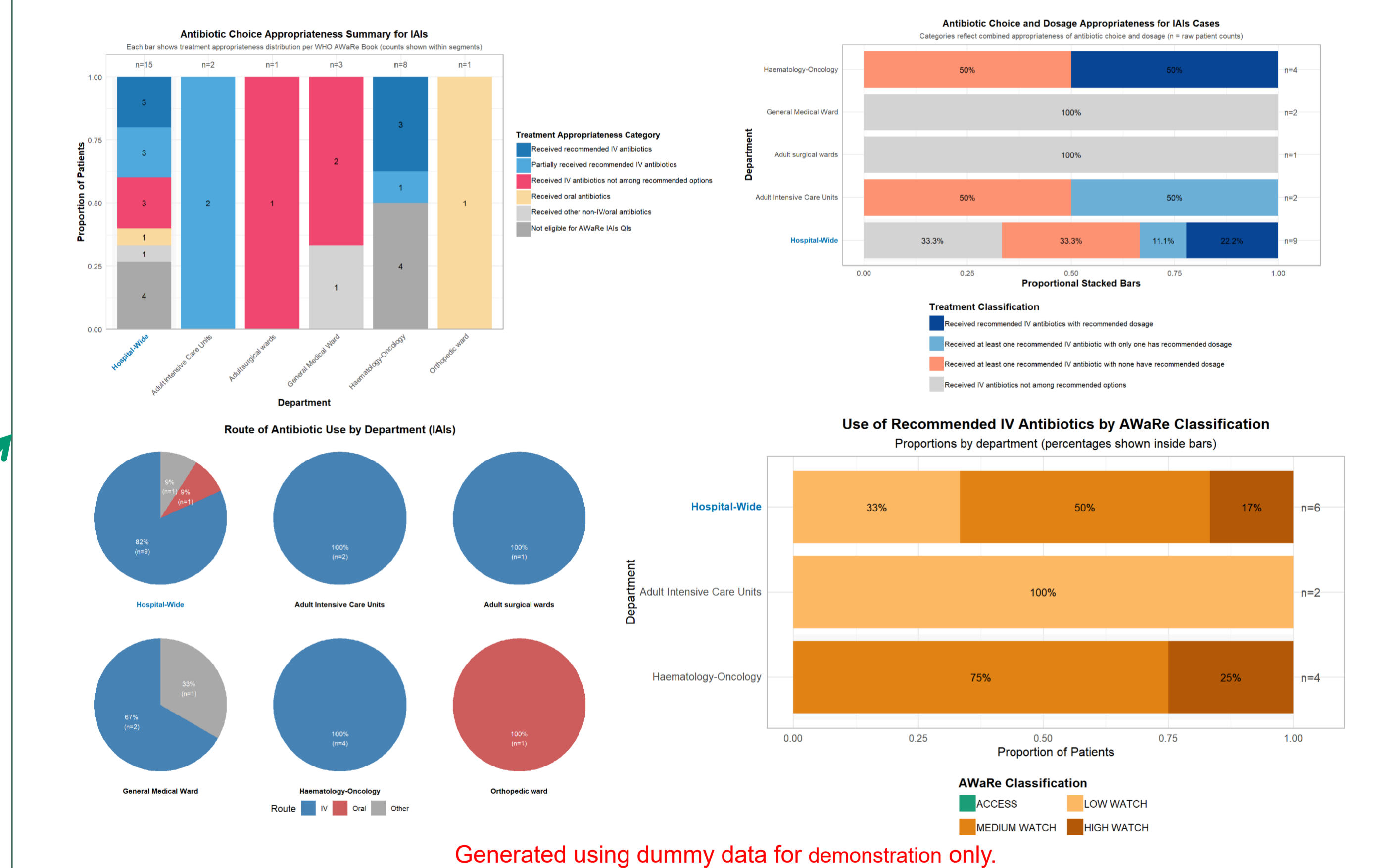
Prototype piloting

Automated, condition-specific, AWaRe book guideline-linked assessments of prescribing quality in inpatient and outpatient care.

Outpatient AWaRe QI dashboard

Inpatient AWaRe QI dashboard

Upload Global-PPS export



Piloted with retrospective Global-PPS datasets (Africa and Asia):

- Condition-specific outputs highlight stewardship targets.
- Maximises use of existing PPS data; no extra data collection needed.

Conclusion & Future Work

- The dashboards operationalise AWaRe QIs leveraging existing Global-PPS feedback reporting system.
- Enables monitoring of prescribing quality and stewardship progress.
- Future: extension to paediatrics and Global-PPS integration.