

WEBINAR

THEME

Implementing Evidence-Based Antimicrobial Prescribing to Combat AMR and Strengthen Global Stewardship - The GUIDE Framework in Action



Join us for the launch presentation of a new evidence-based tool to enhance antimicrobial prescribing and stewardship. Share your feedback to help us strengthen its value and usability for global practice.

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Opening Remarks

Dr Viviana Muñoz Tellez



Policy in Practice:
Why GUIDE Framework Matters Now

Evidence-Based, Five-Step Stewardship for Safer, Smarter Antibiotic Decisions

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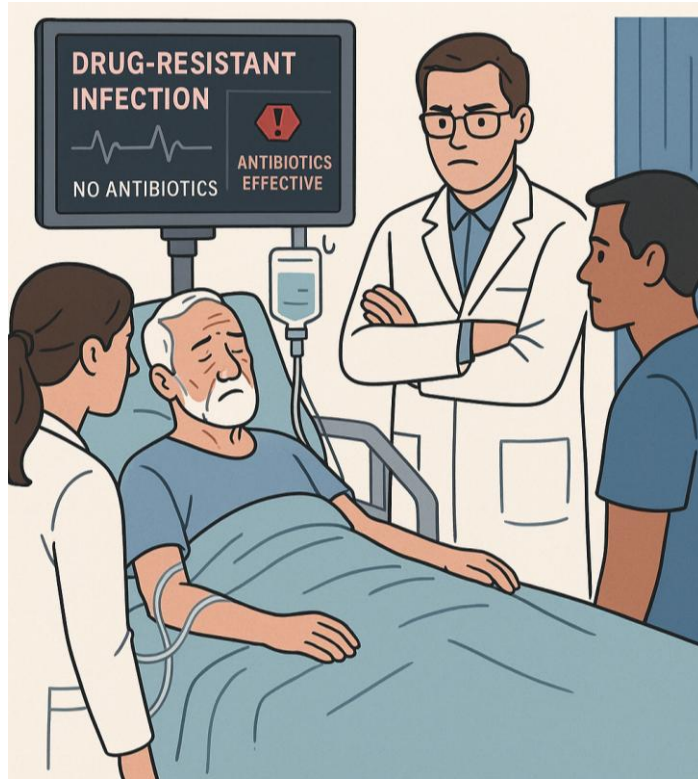
The Global Threat of AMR

- AMR is among the top ten global health threats.
- Causes over 1 million deaths each year, hitting low-resource settings hardest.
- One in six bacterial infections is now antibiotic-resistant.
- Resistance is rising, worsened by COVID-19 misuse of antibiotics.
- Common infections risk becoming untreatable, a silent pandemic spreading worldwide.



Definition of Antimicrobial Stewardship (AMS)

- Antimicrobial Stewardship (AMS) is a coordinated set of strategies aimed at improving antimicrobial use, enhancing patient outcomes, and reducing antimicrobial resistance.
- AMS aims to ensure the sustainable and responsible use of antibiotics in healthcare settings.



Bacteriology

Manual Blood culture and Sensitivity

Growth Of Klebsiella spp.

Antibiotic susceptibility For: Klebsiella spp.

Amoxicillin & Clavulanic Acid (AMC)	Resistant
Ampicillin & sulbactam (SAM)	Resistant
Imipenem (IPM)	Resistant
Meropenem (MEM)	Resistant
Cefuroxime (CXM)	Resistant
Cefotaxime (CTX)	Resistant
Aztreonam (ATM)	Resistant
Amikacin (AK)	Resistant
Cefoxitin (FOX)	Resistant
Piperacillin & Tazobactam (TZP)	Resistant
Sulphamethazole & Trimethoprim (SXT)	Resistant
Levofloxacin (LEV)	Resistant
Ciprofloxacin (CIP)	Resistant
Tetracycline (TE)	Resistant
Ceftriaxone (CRO)	Resistant
Cefepime(FEP)	Resistant
Doxycycline (DO)	Resistant
Gentamicin (CN)	Resistant
Tigecycline (TGC)	Resistant
Tobramycin (TOB)	Resistant
Cefoperazone (CFP)	Resistant

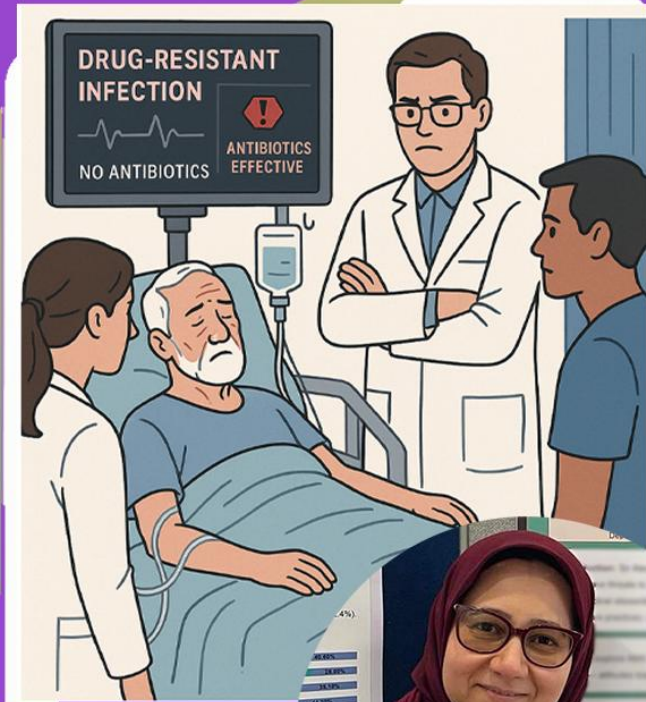
Comment: -Multi-drug resistant gram negative bacteria can be treated by a combination of Imipenem and aminoglycosides or Imipenem and Colistin.

End Of Report

“Without stewardship, antibiotics fail, and patients die.

With stewardship, we preserve antibiotics for those who need them most.”

Dr Rasha Abdelsalam Elshenawy



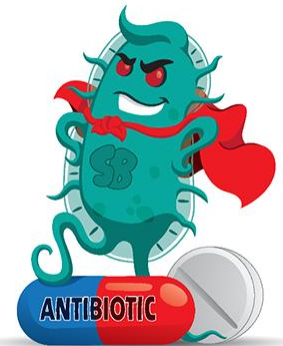
**Antibiotics are precious –
without stewardship,
we lose them.**



Dr Rasha Abdelsalam Elshenawy

Why Antimicrobial Stewardship is Essential?

- 4.95 million deaths linked to bacterial AMR (The Lancet, 2022).
- Persistent resistance trends (WHO GLASS, UKHSA ESPAUR).
- Inappropriate antibiotic use continues to drive resistance.
- Stewardship is essential for global health security.



Why a New GUIDE Framework?

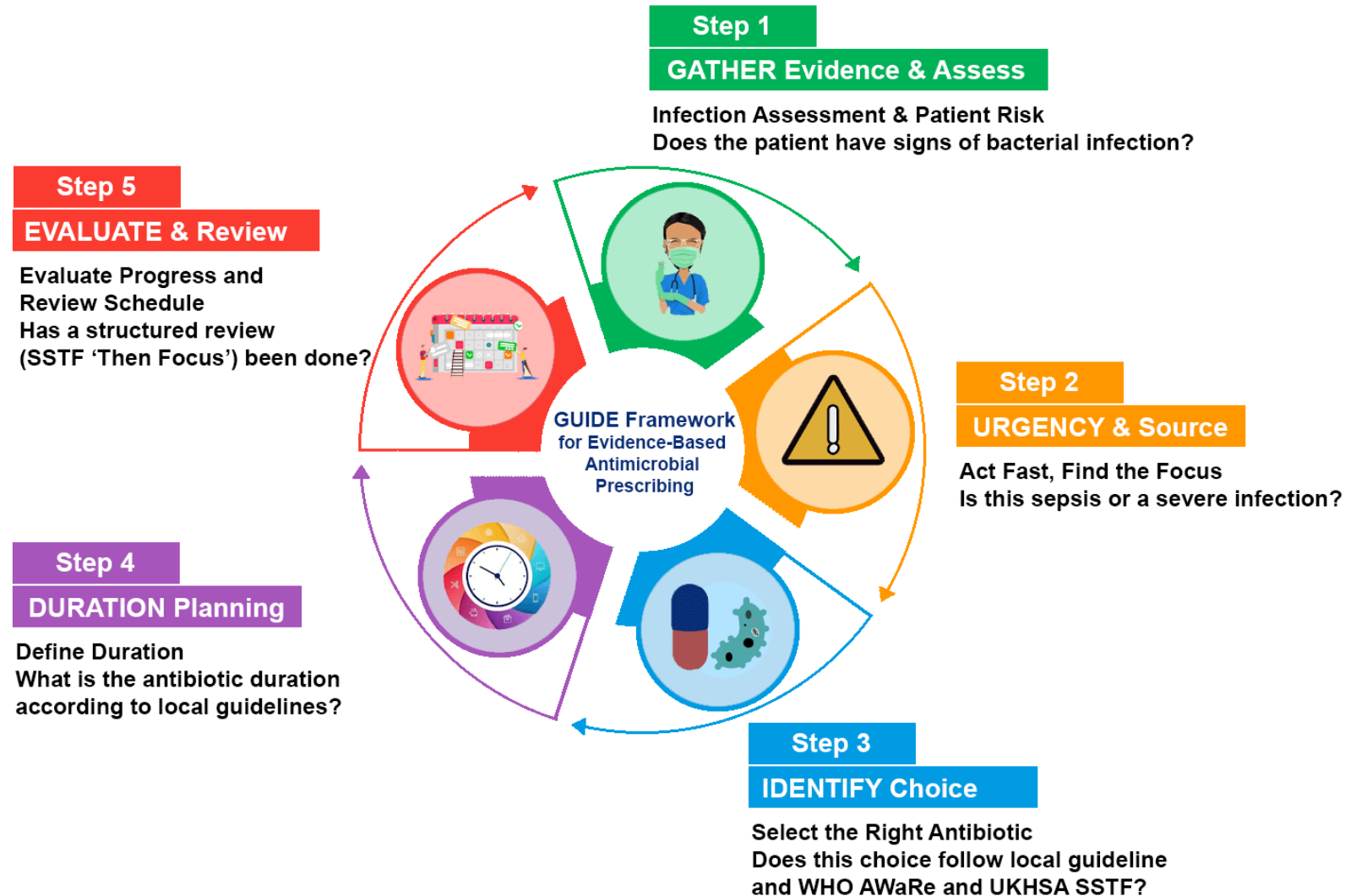
- Existing frameworks, such as Start Smart Then Focus and AWaRe, need adaptability and resilience across diverse healthcare systems.
- LMICs face diagnostic and policy challenges.

The GUIDE Framework Overview

- The GUIDE Framework integrates WHO AWaRe, SSTF, and One Health principles.
- It bridges policy and evidence-based practice for equitable stewardship.



The GUIDE Framework Overview



The **GUIDE** Framework Overview

Five-Step Model for Evidence-Based Prescribing:

-  **G** – Gather Evidence
-  **U** – Urgency & Source
-  **I** – Identify Choice
-  **D** – Define Duration
-  **E** – Evaluate & Review

Integrates AWaRe and SSTF principles across care settings.

Policy in Practice

- Embeds stewardship into national action plans and digital systems.
- Defines measurable KPIs (48–72 h reviews, documentation).
- Improves equitable access to essential antibiotics.
- Promotes real-time, accountable stewardship.

Step 1 – Gather Evidence

- Assess infection and patient risk before prescribing.
- Confirm bacterial infection via cultures or biomarkers.
- Strengthen diagnostic stewardship.
- Policy implication: Invest in testing capacity and workforce training.

1

GATHER Evidence of Infection & Patient Risk

Does the patient have signs of bacterial infection?

Check for infection: Use history, exam, symptoms. **Check risk:** severity, weak immunity, prior antibiotics.

Investigate if needed: Cultures (before antibiotics if safe), labs (CRP, bloods, organ function), viral tests if viral signs, imaging if appropriate.

STOP antibiotics if: No bacterial evidence, viral signs, or patient stable. **Document**, give supportive care, arrange follow-up, **review again if worsens**.

PROCEED if: Strong suspicion of bacterial infection, clinical deterioration, or life-threatening case. **Document decision clearly**.

Continue to Step 2 (Urgency & Source).

Step 2 – Urgency & Source

- Identify infection source early.
- Start antibiotics within 1 hour in sepsis.
- For stable patients: investigate before prescribing.
- Policy implication: Improve sepsis recognition systems.

2

URGENCY & SOURCE

Act Fast, Find the Focus

Is this sepsis or a severe infection?

Identify source: Respiratory, urinary, skin/soft tissue, intra-abdominal, bloodstream, CNS. Source guides antibiotic choice.

Immediate (sepsis/critical): Start antibiotics **within 1h** + fluids + source control. Cultures first if safe. **Do not delay if unstable.** → Step 3

Guided (non-severe): Follow local guideline, use **narrowest effective drug**, take cultures if safe, review at 48–72h, consider outpatient care. → Step 3

Targeted (stable/uncertain): Await investigations if safe, consider narrow-spectrum empirical if treating, monitor closely, **document plan**, review 24–48h.

If treating: → Step 3. **If monitoring:** return to Step 1.

Step 3 – Identify Choice

- Use WHO AWaRe and local guidelines for antibiotic selection.
- Prefer ACCESS drugs; justify WATCH/RESERVE.
- Apply the 8Ds (Diagnosis, Drug, Dose, Duration, De-escalation, etc.).
- Policy implication: Update formularies and strengthen surveillance.

3

IDENTIFY – Select the Right Antibiotic

Does this choice follow local guideline and WHO AWaRe?

Identify choice: Use **local guideline + allergy check**. Choose spectrum proportionate to source & severity.

● ● ● WHO AWaRe:

ACCESS (first choice, narrow-spectrum): Amoxicillin (CAP), Nitrofurantoin (UTI), Flucloxacillin (cellulitis).

WATCH (justify use): Co-amoxiclav, Ciprofloxacin, Piperacillin-tazobactam, Meropenem.

RESERVE (last resort, ID/micro approval): Colistin, Linezolid, Tigecycline.

Apply 8 D's: Focus on **Diagnosis, Drug, Dose, Duration, De-escalation**.

Document: Drug, dose, route, allergy, stop/review date.

→ **Proceed to Step 4** (Duration Planning).

Steps 4 & 5 – Define & Evaluate

- Define: Set duration and review date from Day 1.
- Evaluate: Review at 48–72 h using CARES (Cease, Amend, Refer, Extend, Switch).
- Policy implication: Mandate documentation in EHRs and audits.

4 DURATION PLANNING

What is the antibiotic duration according to local guidelines?

Typical durations: UTI 3–5d, Pneumonia 5d, Skin/Soft tissue 5d, Surgical prophylaxis = 1 dose.

Document: Duration/review date + indication.

Stop criteria: Afebrile >24h, symptoms improving, biomarkers normalising, oral intake, no active infection.

Review daily: Extend only if justified; record next review date. Specialist input if needed.

Default: Stop unless clinically justified.

→ **Proceed to Step 5** (Evaluation & Review).

5

Evaluate Progress and Review

Has a structured review (SSTF 'Then Focus') been done?

Initial review (48–72h): Check fever, vitals, cultures, consider IV→oral.

Reassess (Day 5–7): Stop if resolved, de-escalate, confirm stability.

Extended (Day 7+): Continue only with justification + documentation.

CARES outcomes: Cease · Amend · Refer · Extend · Switch

Daily review & documentation required

→ **Process complete: keep monitoring.**

GUIDE Framework and Clinical Decision Support for Prescribers and the Health Workforce

Evidence-Based Antibiotic Prescribing Across Care Settings

1 GATHER Evidence of Infection & Patient Risk

Does the patient have signs of bacterial infection?

- **Check for infection:** Use history, exam, symptoms. Check risk: severity, weak immunity, prior antibiotics.
- **Investigate if needed:** Cultures (before antibiotics if safe), labs (CRP, bloods, organ function).
- **STOP antibiotics if:** No bacterial evidence. ● **PROCEED if:** Strong suspicion. ● **Continue to Step 2.**

2 URGENCY & SOURCE – Act Fast, Find the Focus

Is this sepsis or a severe infection?

- **Identify source:** Respiratory, urinary, skin/soft tissue, intra-abdominal, bloodstream, CNS.
- **Immediate (sepsis/critical):** Start antibiotics within 1h. ● **Guided (non-severe):** Follow local guideline.
- **Targeted (stable/uncertain):** Await investigations. ● **If treating → Step 3.**

3 IDENTIFY – Select the Right Antibiotic

Does this choice follow local guideline and WHO AWaRe?

- **Identify choice:** Use local guideline + allergy check. Choose spectrum proportionate to source & severity.
- WHO AWaRe:** ● **ACCESS** (first choice, narrow-spectrum). ● **WATCH** (justify use). ● **RESERVE** (last resort, ID/micro approval).
- **Apply 8 D's:** Focus on Diagnosis, Drug, Dose, Duration, De-escalation. → Proceed to Step 4.

4 DURATION PLANNING

What is the antibiotic duration according to local guidelines?

- **Typical durations:** UTI 3–5d, Pneumonia 5d, Skin/Soft tissue 5d. ● **Document:** Duration/review date + indication.
- **Stop criteria:** Afebrile >24h, symptoms improving. ● **Review daily:** Extend only if justified. ● **Default:** Stop unless clinically justified. → Proceed to Step 5.

5 Evaluate Progress and Review

Has a structured review (SSTF 'Then Focus') been done?

- **Initial review (48–72h):** Check fever, vitals, cultures, consider IV→oral. ● **Reassess (Day 5–7):** Stop if resolved.
- **Extended (Day 7+):** Continue only with justification. ● **CARES outcomes:** Cease · Amend · Refer · Extend · Switch.
- **Daily review required.**

Your decision
today preserve
tomorrow
treatment

Monitoring and Impact

Key KPIs:

1. 48–72 h reviews completed.
2. Indication and review date recorded.
3. Reduction in WATCH/RESERVE use.
4. GUIDE incorporated in stewardship audits.

Integrate digital tools:

EHR prompts, dashboards, GLASS & WHONET links.

Call to Action

- 1 Adopt **GUIDE** across national and institutional AMS programmes.
- 2 Empower prescribers and AMS teams through training.
- 3 Build leadership and digital infrastructure for sustained impact.
- 4 Turn evidence into action to preserve antibiotics for the future.

Acknowledgements & References

- South Centre AMR Programme
- WHO, GLASS, NHS England SSTF
- The Lancet (2022), WHO (2023), Frontiers in Microbiology (2023)





Next Steps for Implementing the GUIDE Framework

Dr Viviana Muñoz Tellez

G U I D E

Questions & Answers

G U I D E

Key takeaways & call to action

GUIDE Framework and Clinical Decision Support for Prescribers and the Health Workforce

Evidence-Based Antibiotic Prescribing Across Care Settings

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SC GUIDE FRAMEWORK FOR EVIDENCE-BASED ANTIBIOTIC PRESCRIBING, NOVEMBER 2025

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The GUIDE Framework for Evidence-based Antibiotic Prescribing

Strengthening Antimicrobial Stewardship for the Healthcare Workforce

By Dr. Rasha Abdelsalam Elshenawy

Antimicrobial resistance (AMR) poses a critical threat to global health security, with inappropriate antibiotic prescribing in hospitals driving the spread of resistant pathogens. This GUIDE Framework for Evidence-based Antibiotic Prescribing provides a structured, five-step model designed to strengthen antimicrobial stewardship (AMS) and empower the healthcare workforce to make informed, proportionate prescribing decisions.

Download:

The GUIDE Framework for Evidence-based Antibiotic Prescribing

This article was tagged: Antibiotics, Antimicrobial Resistance (AMR), Antimicrobial Stewardship, AwaRe Classification, Evidence-based Medicine, Global Health, GUIDE Framework for Evidence-based Antibiotic Prescribing, Health, Healthcare Workforce, World Health Organization (WHO)

The diagram illustrates the GUIDE Framework for Evidence-Based Antibiotic Prescribing. At the top, the word "GUIDE" is spelled out using five colored circles: G (green), U (orange), I (blue), D (purple), and E (red). Below this, the title "The GUIDE Framework for Evidence-Based Antibiotic Prescribing" is displayed in a large, bold, black font. Underneath the title, the subtitle "Strengthening Antimicrobial Stewardship for the Healthcare Workforce" is written in a smaller, bold, black font. The central part of the diagram features a circular flowchart with five steps, each in a colored circle with a number and text: 1 (green) "Gather Evidence & Assess", 2 (red) "Urgency & Source", 3 (orange) "Identify Options", 4 (purple) "Define Duration", and 5 (blue) "Evaluate & Review". Arrows connect these steps in a clockwise cycle. In the center of the flowchart, the text "GUIDE Framework for Antimicrobial Stewardship" is written. At the bottom of the diagram, the name "Rasha Abdelsalam Elshenawy" is written in a bold, black font, followed by her titles "AMR/AMS Global Health Policy Expert" and "South Centre Consultant on AMR and Stewardship" in a smaller, regular black font.

GUIDE

The GUIDE Framework for Evidence-Based Antibiotic Prescribing

**Strengthening Antimicrobial Stewardship
for the Healthcare Workforce**

The circular flowchart represents the GUIDE Framework for Antimicrobial Stewardship. It consists of five steps arranged in a circle, connected by arrows indicating a clockwise flow. The steps are: 1. Gather Evidence & Assess (green circle), 2. Urgency & Source (red circle), 3. Identify Options (orange circle), 4. Define Duration (purple circle), and 5. Evaluate & Review (blue circle). The center of the circle contains the text "GUIDE Framework for Antimicrobial Stewardship".

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AMR/AMS Global Health Policy Expert
South Centre Consultant on AMR and Stewardship

https://www.southcentre.int/sc-guide-framework-for-evidence-based-antibiotic-prescribing-november-2025/?utm_source=chatgpt.com

Thank You

