

Policy in Practice: Implementing Antimicrobial Stewardship Post-COVID-19

Q&A and Commentary



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Q&A Insights, Commentary

This report summarises the key questions and expert commentary for the South Centre, as well as the [South Centre Policy Brief](#) on lessons from the COVID-19 pandemic, to strengthen antimicrobial stewardship and provide practical recommendations discussed during the [South Centre webinar](#) on "Strengthening Antimicrobial Stewardship: Policy Insights from COVID-19 and Future Pandemic Preparedness."

The [webinar](#) featured presentations and panel discussions with leading experts from antimicrobial stewardship institutions and medical research organisations. The [report of the webinar](#) *Advancing Antimicrobial Stewardship Policies: Lessons from the COVID-19 Pandemic and Priorities for Future Health Emergencies* explored the paradox of antimicrobial misuse and limited access during the pandemic. With up to 75% of COVID-19 hospitalised patients receiving antibiotics unnecessarily, and many regions facing shortages, the discussion highlighted the urgent need to embed antimicrobial stewardship in emergency planning and strengthen surveillance, diagnostics, and equitable access systems.

This document synthesises the webinar's reflections and translates them into actionable recommendations specifically designed for prescribers aiming to implement antimicrobial stewardship principles within their clinical practice settings.



Key Questions & Answers

Q1: How do you integrate Antimicrobial Stewardship (AMS) into Universal Health Coverage (UHC), especially in Low- and Middle-Income Countries (LMICS)?

Answer: Integration of AMS into Universal Health Coverage requires:

- **Systemic approach:** Embedding AMS into national health policies and frameworks
- **Equitable access:** Ensuring sustainable and affordable access to antimicrobials through strong supply chains
- **Healthcare workforce development:** Training healthcare professionals on judicious antibiotic use
- **Governance structures:** Implementing AMS programs at all levels of healthcare delivery
- **Multi-sectoral collaboration:** Involving different ministries (health, agriculture, environment) in AMS implementation

The experts emphasized that AMS is "not a choice anymore for any country; it is a necessity." They recommended including AMS as part of the core UHC service package and ensuring that national action plans for Antimicrobial Resistance (AMR) are properly funded and implemented. Many countries have developed national action plans with AMS as a key pillar, but implementation remains suboptimal due to resource constraints and insufficient political commitment.

Q2: For those facilities that do not yet have AMS programs, how can we start having this?

Answer: For healthcare facilities without established AMS programs, the experts suggested a stepwise approach:

1. **Start with the AMS champions:** Identify motivated healthcare professionals within the facility who can advocate for AMS
2. **Build a team:** Form an multidisiplinary AMS committee with representatives from different departments
3. **Begin with process indicators:** Initially focus on setting up basic structures like:
 - Establishing an AMS committee
 - Regular team meetings
 - Review of antibiotic prescribing patterns
 - Analysis of local resistance patterns
4. **Implement basic interventions:** Start with interventions that require minimal resources:
 - Development of local antibiotic guidelines
 - Prescription audits
 - Education and awareness programs
5. **Gradual expansion:** As capacity builds, introduce more advanced interventions like:
 - Formulary restrictions
 - Pre-authorization requirements
 - De-escalation protocols
 - IV-to-Oral switch
 - Antibiotic review (48-72 hours)

The panellists noted that "Every hospital has a champion of antimicrobial stewardship, and that is a good starting point. Many hospitals in low- and middle-income countries lack infectious disease specialists. It is recommended to start with a pediatrician, an intensivist, or any physician who is passionate about antimicrobial stewardship and has training."

Q3: In the middle of pandemic emergency, like COVID-19, how do you ensure that AMS is in place?

Answer: The experts stressed that pandemic preparedness for AMS must happen before, not during, a crisis:

Before the pandemic:

- Develop robust AMS frameworks and protocols
- Train healthcare professionals on AMS principles
- Establish clear guidelines for antimicrobial use during emergencies
- Create sustainable structures that can withstand the stress of the healthcare system

During the pandemic:

- Modify existing AMS strategies to accommodate emergencies
- Deploy digital tools for remote and real-time monitoring of antimicrobial use
- Maintain essential AMS activities (such as antibiogram updates)
- Provide clear communication about appropriate antimicrobial use

The presenters emphasized: "We could not prevent any pandemic from happening, but we need to ensure preparedness to be well prepared for any emergency and maintain resilient and sustainable antimicrobial stewardship practice."

It was further noted that hospitals participating in the antimicrobial stewardship network during COVID-19 adhered to established principles. These facilities maintained antibiotic optimization practices in compliance with local and national guidelines and utilized AMS toolkits such as Start Smart, Then Focus.

Q4: We always talk about community engagement in Antimicrobial Resistance (AMR) and disease surveillance but there is very little engagement at community level. How can we make communities at the forefront of AMR response?

Answer: Effective community engagement strategies include:

- **Simplified communication:** Using plain, simple language and avoiding technical and scientific language
- **Visual aids:** Employing graphics, images, and interactive tools
- **Storytelling:** Using narrative approaches to convey the impact of AMR
- **Multilingual materials:** Developing resources in local languages
- **Education in schools:** Incorporating AMR awareness in school curricula
- **Community champions:** Identifying influential community members to advocate for proper antibiotic use
- **Media campaigns:** Leveraging traditional and social media platforms
- **Continuous engagement:** Maintaining regular communication beyond just awareness weeks

One expert drew parallels between AMR communication challenges and those initially encountered with climate change, stating: "AMR is something like climate change. Today, if you talk to some people about climate change, nobody understands the kind of impact it is going to have in our future. Similar is the situation with antimicrobials."

Another presenter shared her experience: "When speaking with families and children, use simple language, graphics, figures, and storytelling. The public needs to hear stories. Keep engagement consistent—it may not have an immediate impact, but ongoing efforts are valuable." This resonates strongly, especially in secondary care settings where clear communication and trust-building are essential. Her emphasis on consistency and storytelling reflects an approach that can enhance patient and family understanding over time.

Q5: What is the importance of antibiotic stewardship in preventing antimicrobial resistance?

Answer: The experts explained that antibiotic stewardship is crucial for preventing AMR through:

- **Preserving effectiveness:** Ensuring antibiotics remain effective for future generations
- **Optimizing treatment and maintain antibiotic safety:** Using the right antibiotic, at the right dose, for the right duration
- **Reducing selection pressure:** Minimizing unnecessary antibiotic exposure that drives resistance
- **Reserving critical antibiotics:** Protecting broad-spectrum antibiotics for when they're truly needed
- **Evidence-based practice:** Following guidelines based on local resistance patterns

Dr Rasha Abdelsalam Elshenawy provided a practical example: "If we have a patient, and we give this patient a broad-spectrum antibiotic when the patient doesn't need an antibiotic, we educate the bacteria on how to become resistant. Later, if this patient develops a serious infection requiring that antibiotic, we may find the bacteria has become resistant, leading to sepsis because we cannot treat the infection."

The aim of AMS was emphasized as being to "optimize antibiotic use, arrange antibiotic use according to classifications like the WHO AWaRe classification, and reserve broad-spectrum antibiotics for patients who truly need them."

Q6: What is the impact of AMR on public health and what strategies are being implemented to combat it?

Answer: The impact of AMR on public health is profound:

- **Increased mortality:** Expected to cause 10 million deaths annually by 2050
- **Treatment failures:** Infections becoming harder or impossible to treat
- **Economic burden:** Higher healthcare costs and productivity losses
- **Surgical risks:** Compromising the safety of common procedures
- **Disease spread:** Resistant pathogens spreading within communities

Strategies being implemented to combat AMR include:

1. **One Health approach:** Addressing AMR across human, animal, and environmental sectors
2. **Enhanced surveillance:** Monitoring antibiotic use and resistance patterns
3. **Infection prevention:** Strengthening hygiene and vaccination programs
4. **Diagnostic innovations:** Developing rapid tests to distinguish bacterial from viral infections
5. **Research and development:** Investing in new antibiotics and alternatives
6. **Regulatory measures:** Implementing policies to limit inappropriate antibiotic use
7. **Global collaboration:** Coordinating efforts across countries and sectors

Q7: Is there knowledge about preventive measures for COVID-19 and its relation to antibiotic prescription?

Answer: The experts noted that COVID-19 prevention measures had complex effects on antibiotic prescribing:

Positive impacts:

- Reduced transmission of common bacterial infections due to masking, distancing, and hand hygiene
- Decreased overall outpatient antibiotic prescriptions in many countries
- Heightened awareness of infection prevention measures

Negative impacts:

- Empiric antibiotic prescribing for COVID-19 patients despite low bacterial co-infection rates
- Disruption of antimicrobial stewardship programs in hospitals
- Diagnostic uncertainty leading to unnecessary or prophylactic antibiotic prescribing (Just in Case).

Research presented at the webinar found that "35-75% of hospitalized COVID-19 patients received antibiotics, despite low bacterial co-infection rates," highlighting the importance of diagnostic stewardship and clear guidelines for antimicrobial use during respiratory virus outbreaks.

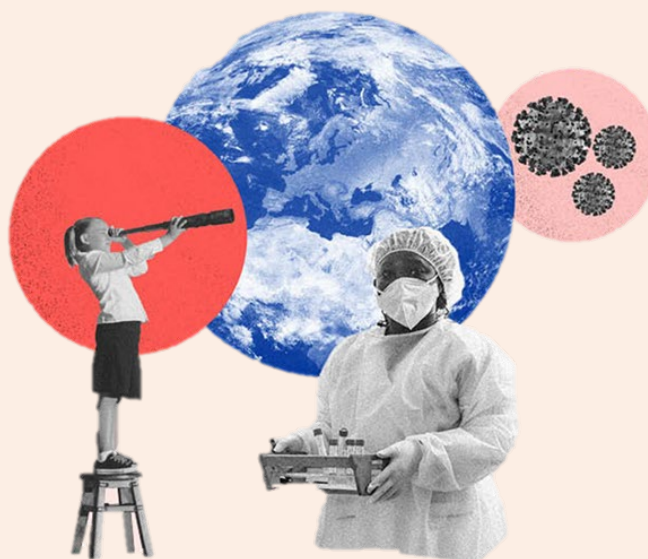
Q8: What are the main challenges of putting AMS into practice in LMICs, especially when there aren't enough trained staff and AMS is seen only as a committee job by hospitals and health authorities?

How can policy more effectively recognize and support the distinct roles and responsibilities of AMS teams at both the national level and within individual healthcare settings?

Answer: The experts acknowledged this challenge and suggested:

- **Differentiated responsibilities:** Clearly defining roles at national, regional, and facility levels
- **Task shifting:** Training existing healthcare workers to incorporate AMS activities
- **Digital solutions:** Using technology to extend the reach of limited human resources
- **Public-private partnerships:** Collaborating with private sector to enhance capacity
- **Phased implementation:** Adapting AMS activities based on available resources

One expert highlighted their experience with network models: "Our whole program created an antimicrobial stewardship model which can be practiced in a country like India or any other resource-constrained setting. Many private hospitals who were previously implementing antimicrobial stewardship are part of our network and provided initial support."



Expert Commentary on the South Centre Policy Brief: Lessons from the Pandemic for Antimicrobial Stewardship and Implementation Strategies

Before presenting our key recommendations, it is important to highlight several critical implementation considerations that emerged from the expert commentary on the [South Centre Policy Brief: Lessons from the Pandemic for Antimicrobial Stewardship and Implementation Strategies](#).

Context-specific adaptation: Antimicrobial stewardship programs must be tailored to local contexts, resource availability, and existing healthcare structures. A one-size-fits-all approach is unlikely to succeed.

1. **Leadership commitment:** Success depends heavily on securing buy-in from institutional leadership, who must view AMS as an essential patient safety and quality improvement initiative rather than an optional program.
2. **Data-driven approach:** Effective implementation requires baseline measurement of antimicrobial use and resistance patterns to identify priorities and measure progress.
3. **Sustainability planning:** Programs should be designed with sustainability in mind, including plans for maintaining momentum during healthcare emergencies.
4. **Interdisciplinary collaboration:** AMS is most effective when it involves collaboration across specialties and professional boundaries, with representation from medicine, pharmacy, nursing, microbiology, and infection control.



The COVID-19 pandemic highlighted both the vulnerabilities and resilience of healthcare systems worldwide. By translating the lessons learned into practical antimicrobial stewardship strategies, prescribers can play a crucial role in preserving antimicrobial effectiveness for future generations.

This report was compiled from the South Centre webinar on "Strengthening Antimicrobial Stewardship: Policy Insights from COVID-19 and Future Pandemic Preparedness" held in April 2025. The webinar featured presentations based on a policy brief developed for the South Centre.

For more information, please visit the South Centre website to access [the full policy brief](#), the [AMS webinar recording](#) and the [full report](#).

