



# Hospital Antimicrobial Stewardship Program

Assessment

Checklist



# Hospital Antimicrobial Stewardship Program Assessment Checklist

This checklist should be used to determine which aspects of antimicrobial stewardship (AMS) programs are already in place to ensure optimal antibiotic prescribing in your hospital and which areas need to be addressed.

Questions tagged 'C' are considered to be indicative of the presence of essential (core) components of AMS programs and resources needed to support AMS programs. Questions tagged 'S' are considered to be additional (supplementary) indicators of the level of a hospital's AMS situation. The questions included in the checklist are consistent with the Transatlantic Taskforce on Antimicrobial Resistance (TATFAR) set of core and supplementary indicators for hospital AMS programs, which was developed by a multidisciplinary expert panel through a modified Delphi process and consensus meeting.<sup>1,2</sup> They are also consistent with the US Centers for Disease Control and Prevention (CDC) checklist for core elements of hospital AMS programs.<sup>3</sup> Similar checklists have been developed by other North American organizations.<sup>4-6</sup> Our checklist was developed specifically with the Asian hospital setting in mind.

Hospital leadership support			
C1	Does your hospital have a <b>formal statement of support</b> from hospital leadership that supports AMS activities to improve antibiotic use?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
C2	Does your hospital allocate any <b>budgeted financial support</b> for AMS activities (eg, support for salary, training, strengthening microbiology and information technology [IT] services)?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
AMS team and infectious disease training			
C3	Does your hospital have a <b>physician (or other) leader</b> responsible for AMS activities?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S1	If you answered 'Yes' to C3, does this leader have <b>specialized infectious disease training</b> ?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
C4	Does your hospital have a <b>pharmacist</b> working on AMS activities?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S2	If the answer to question C4 is 'Yes', is the pharmacist a <b>clinical pharmacist</b> or does this pharmacist have <b>specialized infectious disease training</b> ?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
Do any of the following staff work with physicians or pharmacists to improve antibiotic use:			
C5	Infection control?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
C6	Microbiology?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S3	Nursing?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S4	IT?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>

AMS program interventions			
C7	Do specified antibiotics need to be approved by a physician or pharmacist prior to dispensing or within 48 hours of dispensing at your hospital ( <b>preauthorization</b> )? AND/OR Does a physician or pharmacist review courses of therapy and provide suggestions for use of specified antibiotics within 48 hours of prescription at your hospital ( <b>prospective audit and feedback</b> )?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S5	Does your hospital use <b>computerized decision support systems</b> in relation to antibiotic prescribing?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
C8	Does your hospital have <b>facility-specific antibiotic treatment guidelines</b> for commonly treated infections?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
If you answered 'Yes' to C8, do you have facility-specific antibiotic treatment guidelines for the following infections:			
S6	Community-acquired pneumonia?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S7	Hospital-acquired pneumonia/ventilator-associated pneumonia?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S8	Skin and soft tissue infections?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S9	Sepsis?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S10	Urinary tract infections?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S11	Intra-abdominal infections?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S12	Does your hospital have guidelines for the <b>de-escalation</b> of broad-spectrum antibiotics, including carbapenems?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S13	Does your hospital have guidelines for <b>IV-to-oral conversion</b> of antibiotics?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S14	If you answered 'Yes' to any of questions S6–S13, are <b>hospital guidelines readily available</b> at the point of care?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>

<b>AMS monitoring and reporting</b>			
C9	Does your hospital monitor use of specific antibiotics by days of therapy ( <b>DOT</b> ) or defined daily dose ( <b>DDD</b> )?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S15	Does your hospital <b>monitor antibiotic expenditure</b> ?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S16	Does your hospital <b>monitor compliance</b> with facility-specific treatment guidelines?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
C10	Does your hospital <b>regularly publish</b> antimicrobial resistance data and outcomes measures associated with AMS?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S17	Are <b>results</b> of antibiotic audits or reviews <b>shared directly with prescribers</b> ?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
C11	Is there a <b>hospital antibiogram</b> ?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S18	If the answer to C11 is 'Yes', is the antibiogram <b>regularly updated</b> ?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S19	If the answer to C11 is 'Yes', is the antibiogram <b>easily accessible</b> ?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S20	If the answer to C11 is 'Yes', are there <b>unit-specific antibiograms</b> ?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
<b>Hospital infrastructure</b>			
S21	Does your hospital have <b>IT capabilities</b> to gather and analyze AMS data?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S22	Does your hospital use <b>electronic health records</b> ?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S23	Does your hospital use <b>computerized physician order entry</b> ?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
C12	Does your hospital have an in-house microbiology laboratory or access to a <b>timely and reliable microbiology service</b> ?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S24	If the answer to C12 is 'Yes', does your microbiology service make use of <b>rapid diagnostic reporting</b> ?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S25	If the answer to C12 is 'Yes', does your microbiology service use <b>selective susceptibility reporting</b> ?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>

Education			
S26	Does your hospital provide <b>educational activities</b> for clinicians and other relevant staff on improving antibiotic prescribing?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>
S27	If the answer to S26 is 'Yes', is this <b>mandatory and certified training</b> ?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>

Scores	
• C-score (number of 'Yes' responses to questions tagged 'C')	/12
• S-score (number of 'Yes' responses to questions tagged 'S')	/27
• Total score	/39



If you answered 'Yes' to all 12 core questions (C-score of 12), your hospital has all of the essential elements of a functioning AMS program in place. However, if you answered 'No' to any of the supplementary questions (S-score <27), you can still improve your AMS program by focusing on the missing supplementary elements.



If you answered 'No' to any of the core questions (C-score <12), you should focus on fulfilling the missing core elements to improve your hospital's AMS program. Although the elements in this checklist all help to improve antibiotic use in hospitals, not all elements may be feasible in all hospitals. Rather than trying to address all missing elements at once, you should initially focus on elements that could be feasibly implemented using available resources and then advance the AMS program from there.

# References

1. Pollack LA, et al. Transatlantic Taskforce on Antimicrobial Resistance (TATFAR). Summary the modified Delphi process for common structure and process indicators for hospital antimicrobial stewardship programs. June 12, 2015. Available at: [www.cdc.gov/drugresistance/pdf/summary\\_of\\_tatfar\\_recommendation\\_1.pdf](http://www.cdc.gov/drugresistance/pdf/summary_of_tatfar_recommendation_1.pdf). Accessed November 2017.
2. Pollack LA, et al. A concise set of structure and process indicators to assess and compare antimicrobial stewardship programs among EU and US hospitals: Results from a multinational expert panel. *Infect Control Hosp Epidemiol* 2016;37:1201-1211.
3. Centers for Disease Control and Prevention. Core elements of hospital antibiotic stewardship programs. Available at: [www.cdc.gov/getsmart/healthcare/pdfs/core-elements.pdf](http://www.cdc.gov/getsmart/healthcare/pdfs/core-elements.pdf). Accessed November 2017.
4. Greater New York Hospital Association United Hospital Fund. Antimicrobial stewardship toolkit: Best practices from the GNYHA/UHF Antimicrobial Stewardship Collaborative. 2011. [Appendix 1] Available at: [www.uhfnyc.org/assets/1042](http://www.uhfnyc.org/assets/1042). Accessed November 2017.
5. Minnesota Antimicrobial Stewardship Steering Group. Minnesota guide to a comprehensive antimicrobial stewardship program. September 19, 2012. Available at: [www.health.state.mn.us/divs/idepc/dtopics/antibioticresistance/asp/ac/acmnasp.pdf](http://www.health.state.mn.us/divs/idepc/dtopics/antibioticresistance/asp/ac/acmnasp.pdf). Accessed November 2017.
6. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Getting started: A gap analysis tool for antimicrobial stewardship programs. Toronto, ON: Queen's Printer for Ontario; 2016. Available at: [www.publichealthontario.ca/en/eRepository/Getting%20started%20-%20An%20ASP%20gap%20analysis%20checklist.pdf](http://www.publichealthontario.ca/en/eRepository/Getting%20started%20-%20An%20ASP%20gap%20analysis%20checklist.pdf). Accessed November 2017.