**Georgia Honor Roll for Antibiotic Stewardship Toolkit**

**Introduction:**

Since the release of the original Antibiotic Stewardship Honor Roll, several initiatives led by federal agencies have been introduced to further enhance antimicrobial stewardship in the inpatient settings. The Joint Commission (TJC) issued antimicrobial stewardship accreditation standards which went into effect January 1, 2017. The standards require hospitals, critical access hospitals, and nursing care centers to implement antimicrobial stewardship programs that align with current evidence-based practices. Additionally, the Centers for Medicare and Medicaid Services (CMS) published a proposed rule for hospitals and critical access hospitals in June 2016 requiring demonstration of adherence to nationally recognized guidelines.

In light of these regulations, the Georgia Honor Roll for Antibiotic Stewardship was revised to encourage acute care facilities to build sustainable programs or enhance their existing programs with evidence-based practices.

**Program Details:**

The left-hand column (in white) represents the Centers for Disease Control and Prevention’s (CDC) Core Elements for Antimicrobial Stewardship in acute care. The top row of the table contains the three tiers which define the degree of challenge associated with the examples of antimicrobial stewardship activities listed in the columns below. Activities that are in congruence with those outlined in TJC 2017 Medication Management Standards are designated as such with “TJC” in the lower left-hand corner. Similarly, activities that are in congruence with those outline in the CMS proposed rule for antimicrobial stewardship are designated as such with “CMS” in the lower left-hand corner. We believe participation in the Honor Roll will help align your facility’s stewardship program with evidence-based best practices, and thus may facilitate preparation for accreditation processes.

In this new Honor Roll Program, facilities must apply for Gold, Silver or Bronze status:

Members who wish to apply for Bronze status must provide documentation supporting implementation of at least one activity per each of the CDC Core Elements (these activities may correspond to any of the three tiers – advanced, intermediate or basic – see appendix A1 for examples).

Members who wish to apply for Silver status must provide documentation supporting implementation of at least one activity per each of the CDC Core Elements (these activities may correspond to any of the three tiers – advanced, intermediate or basic); the applicant must also provide documentation that supports implementation of at least four activities that fall under the intermediate tier (intermediate activities may also fulfill requirement of CDC Core Element compliance for the Core Elements that correspond to the intermediate activities chosen – see appendix A2 for examples).

Members who wish to apply for Gold status must provide documentation supporting implementation of at least one activity per each of the CDC Core Elements (these activities may correspond to any of the three tiers – advanced, intermediate or basic); the applicant must also provide documentation that supports implementation of at least four activities that fall under the advanced tier (advanced activities may also fulfill requirement of CDC Core Element compliance for the Core Elements that correspond to the advanced activities chosen – see appendix A3 for examples).

Please see appendix B for examples of acceptable supporting documents.

|  |  |
| --- | --- |
| **Status** | **Requirements** |
| **Bronze** | **Must meet at least one criteria per core element**  |
| **Silver** | **Must meet at least one criteria per core element and at least 4 intermediate criteria** |
| **Gold** | **Must meet at least one criteria per core element and at least 4 advanced criteria**  |

**Transition from current model to new model:**

All current honor roll members will be grandfathered into this new system as bronze members for 1 year, beginning on January 1st, 2018. Grandfathered facilities may apply for an upgrade in status at any time within this year period.

**Status Renewal Process:**

The new model will include a renewal process for the awarded status. All recognized facilities will need to re-apply to maintain their status **every 3 years** from their initial award date. Facilities may choose to apply for an upgrade in their status at any point.

While applications may be submitted at any point during the year, review of applications will occur on a quarterly basis during the following months: December, March, June and September. Statuses will be awarded during the month following review.

**How to apply:**

1. Complete the honor roll model checklist (Appendix C) to help determine the status for which your facility meets criteria
2. Save a copy of your completed honor roll model checklist to your computer
3. Access and complete the application form (Appendix D)
4. Save a copy of your completed application form to your computer
5. Submit completed application form, completed Honor Roll Model Checklist, and all supporting documents via email to Shreena.Advani@dph.ga.gov

**Resources for implementation of stewardship activities:**

Please see Appendix E for a list of resources to assist with implementation of stewardship activities listed within the Honor Roll model.

**Appendix A1. Example Application for Bronze Status:**

A facility has submitted documentation supporting the implementation of all of the activities outlined in red below. The facility meets criteria for Bronze status because there is one activity completed per CDC Core Element.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Advanced** | **Intermediate** | **Basic** |
| **Leadership Commitment** | Leadership commitment used to gain dedicated budget for stewardship activities ***TJC*** | Stewardship related duties are included in job description and annual performance reviews of ASP leads ***TJC*** | A statement of commitment from senior leadership (CEO, CMO etc.) has been obtained***TJC***  |
| **Accountability &****Drug Expertise** | ASP policy includes mandated annual training for all healthcare providers at facility***CMS***  | ASP policy includes more than two program elements/initiatives and performance improvement plans | ASP policy or procedure has been developed outlining purpose and at least two program elements/initiatives ***TJC CMS***  |
| ASP committee shares best practices with others (e.g. mentorship among facilities in community presentation at local/regional/national conference etc.) | ASP committee leads have obtained antimicrobial stewardship training from a recognized professional organization (MAD-ID, SHEA, SIDP etc.) or have completed post-graduate education in infectious diseases | A physician supervised multidisciplinary ASP committee has been convened and access to ID clinician or pharmacist has been established when available ***TJC CMS*** |
| **Action** | Facility-wide prospective audit and feedback is conducted  | Prospective audit and feedback is in place for specific units | Implementation of antibiotic time-out protocol***CMS*** |
|  Protocol to ensure shortest effective length of antibiotic therapy (e.g. automatic stop dates in place) ***TJC*** | Antimicrobial restriction with pre-authorization process ***TJC*** | IV to PO conversion protocol in place***TJC*** |
| Engage in collaborative projects with infection control or other services (e.g. *Clostridium difficile* bundle)***TJC CMS*** | Protocol requiring indications for all antimicrobial prescriptions ***CMS*** | Development of institution specific guidelines for various infectious disease states***TJC CMS*** |
| **Tracking** | Track clinical outcomes associated with improvement in antimicrobial use data***TJC CMS*** | Track and improve days of therapy or defined daily dose of selected antibiotics ***TJC CMS*** | Antibiotic use is tracked on a recurring basis (at least annually)***TJC CMS*** |
| Antibiogram utilized to implement practice change (e.g. changes in antimicrobial formulary) | Development of unit specific antibiogram | Local antibiogram available for use and disseminated to medical staff |
| **Reporting** | Report data in NHSN AU and/or AR modules ***TJC*** | Create a dashboard to report antimicrobial use, infection rates etc.***TJC***  | Antibiotic use and resistance data is shared with hospital staff through presentations, committees etc. ***TJC*** |
| **Education** | Education for all healthcare providers involved in antimicrobial ordering, dispensing, administration and monitoring occurs upon hire and recurs periodically thereafter***TJC CMS*** | Education for healthcare providers reviewing advanced AS topics is provided on a recurring basis **CMS** | Education for healthcare providers reviewing AS topics is provided on an as needed basis **CMS** |
| Patient and family education regarding antimicrobial use is integrated in discharge process for all patients leaving on antibiotics | Patient and family education regarding antimicrobial resistance and use is available for all patients admitted to the facility (i.e. informational posters)  | Patient and family education regarding antimicrobial use is provided as needed to patients ***TJC*** |

**Appendix A2. Example Application for Silver Status:**

A facility has submitted documentation supporting the implementation of all of the activities outlined in red below. The facility meets criteria for Silver status because there is one activity completed per CDC Core Element and 4 of the activities fall within the intermediate tier.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Advanced** | **Intermediate** | **Basic** |
| **Leadership Commitment** | Leadership commitment used to gain dedicated budget for stewardship activities ***TJC*** | Stewardship related duties are included in job description and annual performance reviews of ASP leads ***TJC*** | A statement of commitment from senior leadership (CEO, CMO etc.) has been obtained***TJC***  |
| **Accountability &****Drug Expertise** | ASP policy includes mandated annual training for all healthcare providers at facility***CMS***  | ASP policy includes more than two program elements/initiatives and performance improvement plans | ASP policy or procedure has been developed outlining purpose and at least two program elements/initiatives ***TJC CMS***  |
| ASP committee shares best practices with others (e.g. mentorship among facilities in community presentation at local/regional/national conference etc.) | ASP committee leads have obtained antimicrobial stewardship training from a recognized professional organization (MAD-ID, SHEA, SIDP etc.) or have completed post-graduate education in infectious diseases | A physician supervised multidisciplinary ASP committee has been convened and access to ID clinician or pharmacist has been established when available ***TJC CMS*** |
| **Action** | Facility-wide prospective audit and feedback is conducted  | Prospective audit and feedback is in place for specific units | Implementation of antibiotic time-out protocol***CMS*** |
|  Protocol to ensure shortest effective length of antibiotic therapy (e.g. automatic stop dates in place) ***TJC*** | Antimicrobial restriction with pre-authorization process ***TJC*** | IV to PO conversion protocol in place***TJC*** |
| Engage in collaborative projects with infection control or other services (e.g. *Clostridium difficile* bundle)***TJC CMS*** | Protocol requiring indications for all antimicrobial prescriptions ***CMS*** | Development of institution specific guidelines for various infectious disease states***TJC CMS*** |
| **Tracking** | Track clinical outcomes associated with improvement in antimicrobial use data***TJC CMS*** | Track and improve days of therapy or defined daily dose of selected antibiotics ***TJC CMS*** | Antibiotic use is tracked on a recurring basis (at least annually)***TJC CMS*** |
| Antibiogram utilized to implement practice change (e.g. changes in antimicrobial formulary) | Development of unit specific antibiogram | Local antibiogram available for use and disseminated to medical staff |
| **Reporting** | Report data in NHSN AU and/or AR modules ***TJC*** | Create a dashboard to report antimicrobial use, infection rates etc.***TJC***  | Antibiotic use and resistance data is shared with hospital staff through presentations, committees etc. ***TJC*** |
| **Education** | Education for all healthcare providers involved in antimicrobial ordering, dispensing, administration and monitoring occurs upon hire and recurs periodically thereafter***TJC CMS*** | Education for healthcare providers reviewing advanced AS topics is provided on a recurring basis **CMS** | Education for healthcare providers reviewing AS topics is provided on an as needed basis **CMS** |
| Patient and family education regarding antimicrobial use is integrated in discharge process for all patients leaving on antibiotics | Patient and family education regarding antimicrobial resistance and use is available for all patients admitted to the facility (i.e. informational posters)  | Patient and family education regarding antimicrobial use is provided as needed to patients ***TJC*** |

**Appendix A3. Example Application for Gold Status:**

A facility has submitted documentation supporting the implementation of all of the activities outlined in red below. The facility meets criteria for Gold status because there is one activity completed per CDC Core Element and 4 of the activities fall within the advanced tier.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Advanced** | **Intermediate** | **Basic** |
| **Leadership Commitment** | Leadership commitment used to gain dedicated budget for stewardship activities ***TJC*** | Stewardship related duties are included in job description and annual performance reviews of ASP leads ***TJC*** | A statement of commitment from senior leadership (CEO, CMO etc.) has been obtained***TJC***  |
| **Accountability &****Drug Expertise** | ASP policy includes mandated annual training for all healthcare providers at facility***CMS***  | ASP policy includes more than two program elements/initiatives and performance improvement plans | ASP policy or procedure has been developed outlining purpose and at least two program elements/initiatives ***TJC CMS***  |
| ASP committee shares best practices with others (e.g. mentorship among facilities in community presentation at local/regional/national conference etc.) | ASP committee leads have obtained antimicrobial stewardship training from a recognized professional organization (MAD-ID, SHEA, SIDP etc.) or have completed post-graduate education in infectious diseases | A physician supervised multidisciplinary ASP committee has been convened and access to ID clinician or pharmacist has been established when available ***TJC CMS*** |
| **Action** | Facility-wide prospective audit and feedback is conducted  | Prospective audit and feedback is in place for specific units, antimicrobials, or disease states | Implementation of antibiotic time-out protocol***CMS*** |
|  Protocol to ensure shortest effective length of antibiotic therapy (e.g. automatic stop dates in place) ***TJC*** | Antimicrobial restriction with pre-authorization process ***TJC*** | IV to PO conversion protocol in place***TJC*** |
| Engage in collaborative projects with infection control or other services (e.g. *Clostridium difficile* bundle)***TJC CMS*** | Protocol requiring indications for all antimicrobial prescriptions ***CMS*** | Development of institution specific guidelines for various infectious disease states***TJC CMS*** |
| **Tracking** | Track clinical outcomes associated with improvement in antimicrobial use data***TJC CMS*** | Track and improve days of therapy or defined daily dose of selected antibiotics ***TJC CMS*** | Antibiotic use is tracked on a recurring basis (at least annually)***TJC CMS*** |
| Antibiogram utilized to implement practice change (e.g. changes in antimicrobial formulary) | Development of unit specific antibiogram | Local antibiogram available for use and disseminated to medical staff |
| **Reporting** | Report data in NHSN AU and/or AR modules ***TJC*** | Create a dashboard to report antimicrobial use, infection rates etc.***TJC***  | Antibiotic use and resistance data is shared with hospital staff through presentations, committees etc. ***TJC*** |
| **Education** | Education for all healthcare providers involved in antimicrobial ordering, dispensing, administration and monitoring occurs upon hire and recurs periodically thereafter***TJC CMS*** | Education for healthcare providers reviewing advanced AS topics is provided on a recurring basis **CMS** | Education for healthcare providers reviewing AS topics is provided on an as needed basis **CMS** |
| Patient and family education regarding antimicrobial use is integrated in discharge process for all patients leaving on antibiotics | Patient and family education regarding antimicrobial resistance and use is available for all patients admitted to the facility (i.e. informational posters)  | Patient and family education regarding antimicrobial use is provided as needed to patients ***TJC*** |

**Appendix B: Examples of Acceptable Supporting Documents**

Below are examples of acceptable supporting documents for each of the antibiotic stewardship activities/initiatives in the Honor Roll model.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Advanced** | **Intermediate** | **Basic** |
| **Leadership Commitment** | Copy of budget for antimicrobial stewardship program | Copy of job description for ASP lead (see resources page for sample job description template)  | Signed statement of commitment from senior leadership (see resources page for sample statement)  |
| **Accountability &****Drug Expertise** | Copy of antimicrobial stewardship policy (see resources page for sample policy)  | Copy of antimicrobial stewardship policy (see resources page for sample policy)  | Copy of antimicrobial stewardship policy (see resources page for sample policy)  |
| Copy of presentation given at local/regional/national meeting Or Copy of resources shared with other facilities (include name of facility/facilities with whom the resources were shared)  | Copy of certificate received by program lead from antimicrobial stewardship training program OrProvide information of program lead’s relevant post-graduate education (include institution name and date of program completion)  | A copy of the antimicrobial stewardship program roster (please include member names, position held, and credentials) |
| **Action** | Summary of your current prospective audit and feedback practices (see resources page for example of audit and feedback program) | Summary of your current prospective audit and feedback practices (include which specific unit(s) are being audited and why this unit(s) was chosen) (see resources page for example of audit and feedback program)  | Copy of antibiotic time-out protocol (see resources page for sample policy) OrAny educational documents relating to antibiotic time-out that were distributed  |
| Copy of automatic stop order policy (see resources page for sample policy) Or Summary of how shortest effective duration of therapy is enforced  | Copy of antimicrobial restriction policy (see resources page for sample policy) Or List of restricted antimicrobials and process for approval  | Copy of IV to PO protocol (see resources page for sample policy)  |
| Outline of the components of any collaborative infectious diseases related projects (projects must include involvement of more than 2 hospital departments) (see resources page for examples of collaborative projects)  | Summary of how indication for all antimicrobials is enforced Or Copy of policy regarding indication requirement for all antimicrobials (see resources page for sample policy)  | Copy of institution specific, infectious diseases guideline (see resources page for sample guidelines)  |
| **Tracking** | Copy of antimicrobial use data alongside copy of clinical outcomes data (e.g. *Clostridium difficile* rates)  | Copy of antimicrobial use data (either days of therapy (DOT) or defined daily dose (DDD)) trended over time (see resources page for tools to help with antibiotic use tracking)  | Copy of antimicrobial use data (please include at least 2 consecutive time frames of data e.g. for yearly data must include 2015 and 2016 data) (see resources page for tools to help with antibiotic use tracking)  |
| Summary of how antibiogram is utilized to implement any kind of infectious diseases related practice change (e.g. change in institution specific infectious diseases treatment guideline)  | Copy of unit-specific antibiogram (see resources page for antibiogram guidelines) | Copy of hospital antibiogram and description of how the information is disseminated to hospital staff (see resources page for antibiogram guidelines) |
| **Reporting** | Confer rights in NHSN to the Georgia Department of Public Health  | Copy of antimicrobial stewardship dashboard (see resource page for help on creating a dashboard)  | Copy of presentation that your antimicrobial stewardship program provided for hospital staff (please include audience to whom information was presented)  |
| **Education** | Copy of education provided to healthcare providers in your facility and description of the audience for the education (please include description on how the education is enforced upon hire and periodically thereafter) (see resources page for tools to help develop provider education materials) | Copy of education provided to healthcare providers in your facility and description of how often education is provided (please include audience for education) (see resources page for tools to help develop provider education materials) | Copy of education provided to healthcare providers in your facility and description of what prompted the need for such education (please include audience for education) (see resources page for tools to help develop provider education materials)  |
| Copy of education provided for patients being discharged on antibiotics (see resources page for examples of patient education materials)  | Copy of education provided to patients and their families regarding antimicrobial use and description of how this material is made available to the patients (see resources page for examples of patient education materials)  | Copy of education provided to patients and their families regarding antimicrobial use and a description of how often this education is provided (see resources page for examples of patient education materials) |

**Appendix C. Honor Roll Model Checklist**

Please check all of the activities that your facility’s antimicrobial stewardship program engages in using the table below.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Advanced** | **Intermediate** | **Basic** |
| **Leadership Commitment** | Leadership commitment used to gain dedicated budget for stewardship activities [ ] ***TJC*** | Stewardship related duties are included in job description and annual performance reviews of ASP leads [ ] ***TJC*** | A statement of commitment from senior leadership (CEO, CMO etc.) has been obtained[ ] ***TJC***  |
| **Accountability &****Drug Expertise** | ASP policy includes mandated annual training for all healthcare providers at facility[ ] ***CMS***  | ASP policy includes more than two program elements/initiatives and performance improvement plans[ ]  | ASP policy or procedure has been developed outlining purpose and at least two program elements/initiatives [ ] ***TJC CMS***  |
| ASP committee shares best practices with others (e.g. mentorship among facilities in community presentation at local/regional/national conference etc.)[ ]  | ASP committee leads have obtained antimicrobial stewardship training from a recognized professional organization (MAD-ID, SHEA, SIDP etc.) or have completed post-graduate education in infectious diseases[ ]  | A physician supervised multidisciplinary ASP committee has been convened and access to ID clinician or pharmacist has been established when available [ ] ***TJC CMS*** |
| **Action** | Facility-wide prospective audit and feedback is conducted [ ]  | Prospective audit and feedback is in place for specific units, antimicrobials, or disease states[ ]  | Implementation of antibiotic time-out protocol[ ] ***CMS*** |
|  Protocol to ensure shortest effective length of antibiotic therapy (e.g. automatic stop dates in place) [ ] ***TJC*** | Antimicrobial restriction with pre-authorization process [ ] ***TJC*** | IV to PO conversion protocol in place[ ] ***TJC*** |
| Engage in collaborative projects with infection control or other services (e.g. *Clostridium difficile* bundle)[ ] ***TJC CMS*** | Protocol requiring indications for all antimicrobial prescriptions [ ] ***CMS*** | Development of institution specific guidelines for various infectious disease states[ ] ***TJC CMS*** |
| **Tracking** | Track clinical outcomes associated with improvement in antimicrobial use data[ ] ***TJC CMS*** | Track and improve days of therapy or defined daily dose of selected antibiotics [ ] ***TJC CMS*** | Antibiotic use is tracked on a recurring basis (at least annually)[ ] ***TJC CMS*** |
| Antibiogram utilized to implement practice change (e.g. changes in antimicrobial formulary)[ ]  | Development of unit specific antibiogram[ ]  | Local antibiogram available for use and disseminated to medical staff[ ]  |
| **Reporting** | Report data in NHSN AU and/or AR modules[ ]  ***TJC*** | Create a dashboard to report antimicrobial use, infection rates etc.[ ] ***TJC***  | Antibiotic use and resistance data is shared with hospital staff through presentations, committees etc. [ ] ***TJC*** |
| **Education** | Education for all healthcare providers involved in antimicrobial ordering, dispensing, administration and monitoring occurs upon hire and recurs periodically thereafter[ ] ***TJC CMS*** | Education for healthcare providers reviewing advanced AS topics is provided on a recurring basis [ ] **CMS** | Education for healthcare providers reviewing AS topics is provided on an as needed basis [ ] **CMS** |
| Patient and family education regarding antimicrobial use is integrated in discharge process for all patients leaving on antibiotics[ ]  | Patient and family education regarding antimicrobial resistance and use is available for all patients admitted to the facility (i.e. informational posters) [ ]  | Patient and family education regarding antimicrobial use is provided as need to patients [ ] ***TJC*** |

|  |
| --- |
| **Abbreviations:**  |
| AS – Antimicrobial Stewardship ASP – Antimicrobial Stewardship ProgramAR – Antimicrobial ResistanceAU – Antimicrobial Use  | CEO – Chief Executive Officer CMO – Chief Medical Officer ID –Infectious DiseasesIV – Intravenous  | MAD-ID – Making a Difference in Infectious DiseasesNHSN – National Healthcare Safety NetworkPO – By Mouth SIDP – Society of Infectious Diseases Pharmacists | SHEA – Society of Healthcare Epidemiology of America  |

**Appendix C. Honor Roll Model Checklist**

As a reminder, below is the outline of the specific requirements for each of the status levels.

|  |  |
| --- | --- |
| **Status** | **Requirements** |
| **Gold** | **Must meet at least one criteria per core element and at least 4 advanced criteria** |
| **Silver** | **Must meet at least one criteria per core element and at least 4 intermediate criteria** |
| **Bronze** | **Must meet at least one criteria per core element**  |

**Appendix D. Georgia Honor Roll for Antibiotic Stewardship Application Form**

Please fill this form out in its entirety. Applications will be deemed incomplete if any of the below information is omitted.

|  |  |
| --- | --- |
| **Applicant Name**:             |  |
|  Last First |  |
| **Applicant Title**:       |  |
| **Applicant Email Address**:       |  |
| **Facility Name**:       |  |

The new Georgia Honor Roll for Antibiotic Stewardship is a three-tiered system in which facilities have the opportunity to meet Bronze, Silver or Gold status. Please review program details for more information regarding this new model.

**Please indicate the status for which your facility is applying:**

|  |  |  |
| --- | --- | --- |
| [ ]  Bronze | [ ]  Silver | [ ]  Gold |

Please email completed form along with completed honor roll model checklist (Appendix C) and supporting documents for each of the activities you indicated on your checklist to Shreena.Advani@dph.ga.gov.

**Appendix E. Resources for Implementation of Stewardship Activities**

**Leadership Commitment Resources:**

* Sample letter to Georgia HAI Advisory Committee (Source: GDPH)

<https://dph.georgia.gov/sites/dph.georgia.gov/files/related_files/site_page/Sample%20letter%20to%20Georgia%20HAI%20Advisory%20Committee.pdf>

* Article “How to Pitch an Antimicrobial Stewardship Program to the Hospital C-Suite” (Source: Open Forum Infectious Diseases)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5104972/>

* Article “Demonstrating the Value of Antimicrobial Stewardship Programs to Hospital Administrators” (Source: Clinical Infectious Diseases)

<https://oup.silverchair-cdn.com/oup/backfile/Content_public/Journal/cid/59/suppl_3/10.1093/cid/ciu566/2/ciu566.pdf?Expires=1504040398&Signature=BXzEt~NAdQLvbAvm~2UPxDQ9KqdFDcIpLSwjlXGx-kaYhYNp15N7jdZ6PSw3CHZdGR8y8micLMdgpEwlgt7iqXNBGIsFYaYm~lsrcrWI5JrVhXI4LVQuP42YCI6VlhRJeiT6cyuYzBIpf2i1H8VlbmCZ0f4kFskPdEGqY83CSlJczHUM7q0kxYhexw9L8jt~EcOvDy3zN-GoqLB~xwPirPJfUqP0MIhe~tNFwa-2YbegNZ-b~48cydsi4nm78zQReHVt41V1HfCsmiAL1HSNDfo0yEM4Kpbq8sRPXkeKQSBGI7OZMP5EpcztmjwIf2F3Cydq0oleYm44zzBz-r3oVg__&Key-Pair-Id=APKAIUCZBIA4LVPAVW3Q>

* Sample antimicrobial stewardship program proposal (Source: SHEA)

<https://www.shea-online.org/images/priority-topics/ASP_proposal_blinded_K__Kuper_.pdf>

* Sample job description including antimicrobial stewardship related duties (Source: SIDP)

<https://sidp.org/Resources/Documents/ID%20Jobs/AHS%20-%20Clinical%20Pharm%20Specialist-Infectious%20Disease.pdf>

**Accountability and Drug Expertise Resources:**

* Sample antimicrobial stewardship policy and procedures (Source: California Department of Public Health)

 <https://archive.cdph.ca.gov/programs/hai/Documents/ASPToolkit2015FINAL_ADA.pdf>

* Step-by-Step Approach for Development and Implementation of Hospital Antibiotic Policy and Standard Treatment Guidelines (Source: WHO)

<http://apps.who.int/medicinedocs/documents/s19184en/s19184en.pdf>

**Action Resources:**

* Antibiotic Time Out
	+ Article “Taking and Antibiotic Time-out: Utilization and Usability of Self-Stewardship Time-out Program for Renewal of Vancomycin and Piperacillin-Tazobactam” (Source: Hospital Pharmacy) <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4750836/>
	+ FREE Online CME/CPE Course on Optimizing Antimicrobial Therapy with Timeouts (Source: Stanford Center for Continuing Medical Education)

<https://med.stanford.edu/cme/courses/online/optimizing-antimicrobial-therapy.html>

* + Antimicrobial Time-Out Policy (Source: Missouri Southeast Hospital)

<https://www.sehealth.org/~/media/files/healthcare-professionals/med-staff-guidelines/tab-7--antimicrobial-time-out-policy-and-form.pdf?la=en>

* Prospective Audit and Feedback
	+ Article “Prospective Audit and Feedback of Antimicrobial Stewardship in Critical Care: Program Implementation, Experience, and Challenges” (Source: Pharmacy Practice)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3282196/pdf/cjhp-65-31.pdf>

* + Overview of Prospective Audit with Intervention and Feedback (Source: Public Health Ontario)

<http://www.publichealthontario.ca/en/BrowseByTopic/InfectiousDiseases/AntimicrobialStewardshipProgram/Documents/ASP_Strategy_Prospective_Audit_Intervention_Feedback.pdf>

* + Example of Prospective Audit and Feedback Program (Source: Palomar Health)

<https://www.cdph.ca.gov/Programs/CHCQ/HAI/CDPH%20Document%20Library/ASPToolkit_Example%2010.1.pdf>

* IV to PO (intravenous to oral)
	+ IV to PO Conversion Quick Guide (Source: SHEA)

<https://www.shea-online.org/images/priority-topics/Intermountain-IV-PO-Quick-Guide.pdf>

* + Sample IV to PO Policy (Source: Stanford Health Care)

<http://med.stanford.edu/bugsanddrugs/guidebook/_jcr_content/main/panel_builder_0/panel_0/download_1/file.res/IV_to_PO_Conversion_Policy.pdf>

* Antimicrobial Restriction
	+ Overview of Antimicrobial Formulary Restriction (Source: Public Health Ontario)

<http://www.publichealthontario.ca/en/BrowseByTopic/InfectiousDiseases/AntimicrobialStewardshipProgram/Documents/ASP_Strategy_Formulary_Restriction.pdf>

* + Article “Impact of Formulary Restriction with Prior Authorization by an Antimicrobial Stewardship Program” (Source: Virulence)

<http://www.tandfonline.com/doi/pdf/10.4161/viru.21657?needAccess=true>

* + Sample Anti-Infective Restriction Policy (Source: Nebraska Medicine)

<https://www.nebraskamed.com/sites/default/files/documents/for-providers/asp/restrictions-ref-jan-16.pdf>

* + Sample Antimicrobial Restriction Policy (Source: Stanford Health Care)

<http://med.stanford.edu/bugsanddrugs/guidebook/_jcr_content/main/panel_builder/panel_0/download/file.res/Restricted%20ABX%20Policy%202016-06-13%20-%20TABLE.pdf>

* Shortest Effective Length of Antibiotic Therapy
	+ Overview of Automatic Stop Orders (Source: Public Health Ontario)

<http://www.publichealthontario.ca/en/BrowseByTopic/InfectiousDiseases/AntimicrobialStewardshipProgram/Documents/ASP_Strategy_Automatic_Stop_Orders.pdf>

* + Sample Antibiotic Stop/Review Date and Indication Policy (Source: Newcastle Hospital)

<http://www.newcastle-hospitals.org.uk/downloads/policies/Infection%20Control/Antibiotic_Stop_Review_Policy_201501.pdf>

* + Article “The New Antibiotic Mantra – Shorter is Better” (Source: JAMA Internal Medicine)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5233409/pdf/nihms-839114.pdf>

* + Article “Duration of Antibiotic Treatment in Community-Acquired Pneumonia” (Source: JAMA Internal Medicine)

<http://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2536189>

* + Article “Duration of Antibiotic Treatment for Acute Pyelonephritis and Septic Urinary Tract Infection – 7 Days or Less Versus Longer Treatment: Systematic Review and Meta-analysis of Randomized Controlled Trials”

<https://www.ncbi.nlm.nih.gov/pubmed/23696620>

* + Article “Comparison of Short-Course (5 Days) and Standard (10 Days) Treatment for Uncomplicated Cellulitis” (Source: JAMA Internal Medicine)

<http://jamanetwork.com/journals/jamainternalmedicine/fullarticle/760487>

* + Article “Trial of Short-Course Antimicrobial Therapy for Intraabdominal Infection” (Source: NEJM)

<http://www.nejm.org/doi/full/10.1056/NEJMoa1411162>

-Development of Institution Specific Guidelines

* + Step-by-Step Approach for Development and Implementation of Hospital Antibiotic Policy and Standard Treatment Guidelines (Source: WHO)

<http://apps.who.int/medicinedocs/documents/s19184en/s19184en.pdf>

* + Article “Using Local Microbiologic Data to Develop Institution-Specific Guidelines for the Treatment of Hospital-Acquired Pneumonia” (Source: CHEST)

[http://journal.chestnet.org/article/S0012-3692(15)52792-X/pdf](http://journal.chestnet.org/article/S0012-3692%2815%2952792-X/pdf)

* + Sample *Clostridium difficile* Testing Guideline (Source: UW Health)

<https://www.uwhealth.org/cckm/delegationpractice-protocols/inpatient-delegation-protocols/name-97285-en.html>

* + Sample Clinical Pathway for *Clostridium difficile* Infection (Source: Nebraska Medicine Antimicrobial Stewardship Program)

<https://www.nebraskamed.com/sites/default/files/documents/for-providers/asp/clinical%20pathway_cdiff_revised_10-13.pdf>

* + Sample Antibiotic Protocol for Empiric Therapy of Community-Acquired Pneumonia (Source: Nebraska Medicine Antimicrobial Stewardship Program)

<https://www.nebraskamed.com/sites/default/files/documents/for-providers/asp/cap-guideance-2015-revision.pdf>

* + Sample Antibiotic Protocol for Empiric Therapy of Nosocomial Pneumonia: Health-Care Associated Pneumonia, Hospital-Acquired Pneumonia, and Ventilator-Associated Pneumonia (Source: Nebraska Medicine Antimicrobial Stewardship Program)

<https://www.nebraskamed.com/sites/default/files/documents/for-providers/asp/hcap-hap-vap-guidance-2015-revision.pdf>

* + Sample Empiric Antibiotic Selection Pathway for Sepsis (Source: Nebraska Medicine Antimicrobial Stewardship Program)

<https://www.nebraskamed.com/sites/default/files/documents/for-providers/asp/sepsis-antibiotics-2014.pdf>

* + Sample Adult Antibiotic Guideline for Severe Sepsis and Septic Shock (Source: New South Wales)

<https://www.nebraskamed.com/sites/default/files/documents/for-providers/asp/uti-asbu-guidance-final.pdf>

* + Sample *Staphylococcus aureus* Bloodstream Infection Treatment Guideline (Source: Nebraska Medicine Antimicrobial Stewardship Program)

<https://www.nebraskamed.com/sites/default/files/documents/for-providers/asp/staph-aureus-treatment.pdf>

* + Sample Urinary Tract Infection and Asymptomatic Bacteriuria Guidance (Source: Nebraska Medicine Antimicrobial Stewardship Program)

<https://www.nebraskamed.com/sites/default/files/documents/for-providers/asp/uti-asbu-guidance-final.pdf>

* + Sample Intra-Abdominal Infection Guideline (Source: University of Pennsylvania Health System Antimicrobial Stewardship Program)

<http://www.uphs.upenn.edu/antibiotics/Abdominal_Infections.html>

* + Sample of Guide to Antimicrobials (Source: University of California San Francisco Medical Center Infectious Diseases Management Program)

<http://idmp.ucsf.edu/sites/idmp.ucsf.edu/files/wysiwyg/Guide%20to%20Antimicrobials%202017.pdf>

-Requiring Indications for All Antimicrobial Orders

* + Article “Use of Electronic Health Records and Clinical Decision Support Systems for Antimicrobial Stewardship”

<https://academic.oup.com/cid/article/59/suppl_3/S122/318775/Use-of-Electronic-Health-Records-and-Clinical>

* + Sample Antibiotic Stop/Review Date and Indication Policy (Source: Newcastle Hospital)

<http://www.newcastle-hospitals.org.uk/downloads/policies/Infection%20Control/Antibiotic_Stop_Review_Policy_201501.pdf>

-Infectious Diseases Treatment/Management Bundles (collaborative projects)

* + Article “Impact of an Evidence-Based Bundle Intervention in the Quality-of-Care Management and Outcome of *Staphylococcus aureus* Bacteremia” (Source: Clinical Infectious Diseases)

<https://academic.oup.com/cid/article/57/9/1225/488157/Impact-of-an-Evidence-Based-Bundle-Intervention-in>

* + Article “Management Bundles for Candidemia: the Impact of Compliance on Clinical Outcomes” (Source: Journal of Antimicrobial Chemotherapy)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4291239/pdf/dku414.pdf>

* + Article “Veterans Affairs Initiative to Prevent Methicillin-Resistant Staphylococcus aureus Infections” (Source NEJM)

<http://www.nejm.org/doi/pdf/10.1056/NEJMoa1007474>

* + Bundle Strategies for the Management of *Clostridium difficile* Infection (Source: Atlantic Quality)

<http://atlanticquality.org/download/508_bundle_strategies.pdf>

* + Best Practices Bundle for Prevention and Control of the Transmission of Clostridium difficile (Source: CIMRO of Nebraska)

<http://www.cimronebraska.org/Main_Content_Documents/Best%20Practice%20C%20diff%20Prevention%20Bundle.pdf>

* Toolkit for Reduction of Clostridium difficile Infections Through Antimicrobial Stewardship (Source: AHRQ)

<https://www.ahrq.gov/professionals/quality-patient-safety/patient-safety-resources/resources/cdifftoolkit/index.html>

**Tracking and Reporting Resources:**

* National Healthcare Safety Network (NHSN) Antimicrobial Use and Antimicrobial Resistance Options (Source: CDC)

<https://www.cdc.gov/nhsn/acute-care-hospital/aur/index.html>

* Measuring Antimicrobial Use: A Step-by-Step Guide (Source: California Department of Public Health)

<https://www.cdph.ca.gov/Programs/CHCQ/HAI/CDPH%20Document%20Library/ASPToolkit_Example%207.1.pdf>

* The Antimicrobial Consumption Tool (Source: European Centre for Disease Prevention and Control)

<http://amu-tools.org/amctool/amctool.html>

* How to Calculate Antimicrobial Defined Daily Doses (DDDs) and DDDs per 1000 Patient Days (Source: MSH UHN Antimicrobial Stewardship Program)

<http://www.antimicrobialstewardship.com/sites/default/files/article_files/how_to_calculate_ddds_final.pdf>

* Article “Antimicrobial Stewardship Programs: Appropriate Measures and Metric to Study Their Impact” (Source: Current Treatment Options in Infectious Diseases)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4431704/pdf/40506_2014_Article_15.pdf>

* Defined Daily Dose (DDD) Definition and General Considerations (Source: WHO)

<https://www.whocc.no/ddd/definition_and_general_considera/>

* Antibiogram Guideline - Analysis and Presentation of Cumulative Antimicrobial Susceptibility Test Data Approved Guideline (Source: CLSI)

<http://demo.nextlab.ir/getattachment/71ef0d7c-d118-4cbc-b1e2-73731c4b35ea/CLSI-M39-A.aspx>

* Utilization of the Antibiogram in Clinical Practice Modules (Source: BugsvsDrugs)

 <http://www.bugsvsdrugs.com/module_one.aspx>

* Creating an Antimicrobial Stewardship Dashboard (Source: Southern California Kaiser Permanente Medical Group)

<https://archive.cdph.ca.gov/programs/hai/Documents/6a_ASPCollaborativeDevelopingASP_DashboardDrRieg111815.pdf>

**Education Resources:**

* Patient Education
	+ Handout “You’ve Been Prescribed an Antibiotic Now What?” (Source: CDC)

<https://www.cdc.gov/getsmart/healthcare/pdfs/16_265926_antibioticfactsheet_v7_508-final.pdf>

* + Poster “Viruses or Bacteria What’s Got You Sick?” (Source: CDC)

<https://www.cdc.gov/getsmart/community/downloads/getsmart-chart.pdf>

* + Fact Sheet “Preventing and Treating Bronchitis” (Source: CDC)

<https://www.cdc.gov/getsmart/community/downloads/flyer-bronchitis.pdf>

* + Fact Sheet “Antibiotic Resistance – The Global Threat” (Source: CDC)

<https://www.cdc.gov/getsmart/week/downloads/antibiotic-resistance-the-global-threat.pdf>

* + Brochure “A Guide to Antibiotic Stewardship” (Source: Rochester Regional Health)

<http://nebula.wsimg.com/8ffd0df902b630b3d3c30fddf93fb514?AccessKeyId=FF4AA19B2C789EB499E8&disposition=0&alloworigin=1>

* + Handout “The ABC’s of Antibiotics” (Source: APIC)

<http://www.ahaphysicianforum.org/resources/appropriate-use/antimicrobial/content%20files%20pdf/APIC-ABCsAntibiotic.pdf>

* Healthcare Provider Education
	+ Continuing Education and Curriculum Opportunities for Healthcare Professionals, Medical Students and Pharmacists (Source: CDC)
	<https://www.cdc.gov/getsmart/community/for-hcp/continuing-education.html>
	+ An Antibiotic Stewardship Curriculum for Medical Students (Source: Wake Forest School of Medicine)

<http://www.wakehealth.edu/School/CAUSE/Get-Smart-About-Antibiotics.htm>

* + Educational Resources for Inpatient Healthcare Professionals (Source: CDC)

<https://www.cdc.gov/getsmart/community/for-hcp/inpatient-hcp.html>

* Handout “Preserve the Power of Antibiotics” (Source: CDC)

<https://www.cdc.gov/getsmart/week/downloads/gsw-factsheet-providers.pdf>

* Handout “Is it Really a Penicillin Allergy” (Source: CDC) <https://www.cdc.gov/getsmart/week/downloads/getsmart-penicillin-factsheet.pdf>