Antimicrobial Stewardship - April 2019 - MASEC

The Missouri Department of Health and Senior Services is working with the Missouri Hospital Association and researchers at Washington University in St. Louis to conduct a survey to assess the current status of antimicrobial stewardship programs in Missouri.

Please have the antimicrobial stewardship pharmacist complete the following survey. If your facility does not have a designated antimicrobial stewardship pharmacist, then we recommend using the director of pharmacy, or whoever is most familiar with antimicrobial stewardship at your hospital.

The survey is for information gathering only and will take approximately 15 minutes to complete. The Missouri Department of Health and Senior Services will not audit or penalize hospitals based on survey results. The goal of this survey is to assist the State in efforts to improve quality of antimicrobial stewardship programs throughout Missouri and help hospitals meet legislative mandates on antimicrobial stewardship, and to ensure that hospitals meet state-mandated requirements surrounding antimicrobial stewardship.

Basic Hospital Information:

Q4 What is the name of your hospital?

_____

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Q5 What is the address of your hospital? (Please provide street address, city, and zip code)

_____

- -

Q7 Choose the option that best describes your hospital: (check one)

○ For profit hospital (1)

○ Not for profit hospital (2)

○ Physician-owned hospital (4)

○ Critical access hospital (5)

- -

Display This Question:

If Choose the option that best describes your hospital: (check one) = For profit hospital

Or Choose the option that best describes your hospital: (check one) = Not for profit hospital

Or Choose the option that best describes your hospital: (check one) = Physician-owned hospital

Or Choose the option that best describes your hospital: (check one) = Critical access hospital

Q8 Is your hospital part of a healthcare system?

○ Yes (22)

○ No (23)

- -

Q9 Which trainees rotate through your facility? (Check all that apply)

- ☐ Nursing students (1)

- ☐ NP or PA students (2)

- ☐ Pharmacy students (3)

- ☐ Pharmacy residents (4)

- ☐ Medical students (5)

- ☐ Medical residents (6)

- ☐ Medical fellows (7)

- ☐ Other (social work, physical therapy, respiratory therapy, etc.) (8)

- ☐ ⊗None (9)

- ☐ Unknown (10)

Q10 What electronic medical record (EMR) provider does your facility use?

○ Siemens (1)

○ Meditech (2)

○ McKesson (3)

○ HMS (4)

○ Epic (5)

○ Cerner (6)

○ Other (please specify) (7) _____

○ Unknown (8)

Q12 What is your position in the hospital?

○ Physician (1)

○ Pharmacist (2)

○ Other (please specify) (3) _____

Q75 Do you have a leadership role in your hospital antimicrobial stewardship program?

○ Yes (28)

○ No (29)

Q14 Does your hospital produce an annual antibiogram?

○ Yes (1)

○ Unsure (2)

○ No (3)

Q15 Please describe your antibiogram? (check all that apply)

☐ Hospital wide (1)

☐ Regional (2)

☐ Floor/Unit specific antibiograms (3)

☐ Other (please specify) (4)

_____

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Q40
Antimicrobial Stewardship Program Elements and Resources

Q19 Has your hospital leadership demonstrated a commitment to antimicrobial stewardship?

○ Yes (1)

○ No (2)

Q20 Please describe how your hospital leadership has demonstrated a commitment (check all that apply)

☐　　　　Formal policy statements that facility leadership supports efforts to improve and monitor antibiotic use (1)

☐　　　　Stewardship-related duties are included in job descriptions and annual performance reviews (2)

☐　　　　Ensuring staff from relevant departments are given sufficient time to contribute to stewardship activities (3)

☐　　　　Providing resources for antimicrobial stewardship program training and education (4)

☐　　　　CMO/COO engaged in stewardship activities (For example, reporting directly to the CMO/COO, informally promote activites) (5)

☐　　　　Other (Please specify) (6)

_____

Q21 Who receives resources to support stewardship (eg, Protected time, money or salary, educational support)? (check all that apply)

☐ Physicians (1)

☐ Pharmacists (2)

☐ Other (Please specify) (3)

_____

Q23 Does your antimicrobial stewardship program have leadership that is accountable for program outcomes?

○ Yes (1)

○ No (2)

Q24 Please describe current antimicrobial stewardship accountability and expertise at your facility (check all that apply)

☐ A single physician leader has been identified who is responsible for program outcomes (1)

☐ A single pharmacy leader for antimicrobial stewardship program (2)

☐ Dedicated data analyst support time for antimicrobial stewardship program (3)

☐ We have an antimicrobial stewardship leadership team (4)

Q25 What is the specialty of the physician leader?

○ Hospitalist (1)

○ Infectious Diseases (2)

○ Critical care physician (3)

○ Other (please specify) (4) _____

Q26 Do you have Infectious Diseases physicians on staff?

○ Yes (1)

○ No (2)

Q27 Why is the Infectious diseases physician not your antimicrobial stewardship program leader?

_____

Q28 How much protected/funded physician time for antimicrobial stewardship is supported by the hospital in hours/week?

○ 1-5 hours hours/week (1)

○ 6-10 hours hours/week (2)

○ 11-20 hours hours/week (3)

○ >20 hours hours/week (4)

○ Unknown (5)

Q29 Describe the stewardship pharmacy leader's training level (check all that apply)

☐ Infectious Diseases trained pharmacist (i.e., completed a Fellowship or Infectious Diseases Residency (1)

☐ Residency trained pharmacist (Other than Infectious Disease Residency) (2)

☐ Non-residency trained pharmacist (3)

☐ Board Certified Pharmacotherapy Specialist (BCPS) (4)

☐ BCPS with Advanced Qualifications in Infectious Diseases (5)

☐ Other (please specify) (6)

_____

☐ Unknown (7)

Q31 Has the stewardship pharmacy leader obtained any antimicrobial stewardship program training certificates? (check all that apply)

☐ Making a difference in Infectious Diseases (MAD-ID) certificate (1)

☐ Society of Infectious Diseases Pharmacists (SIDP) certificate (2)

☐ Society for Healthcare Epidemiology of America (SHEA) certificate (3)

☐ Other (please specify) (4)

_____

☐ Unknown (5)

Q33 How much pharmacy staff support does your antimicrobial stewardship program have? (check all that apply)

☐ Dedicated full-time antimicrobial stewardship pharmacist(s) (1)

☐ Dedicated part-time antimicrobial stewardship pharmacist(s) (2)

☐ Staff or clinical pharmacists with some protected time (3)

☐ No protected pharmacist time for antimicrobial stewardship activities (shared pharmacy responsibilities) (4)

☐ Unknown (5)

Q34 How much protected/funded pharmacist time for antimicrobial stewardship is supported by the hospital in hours/week?

○ None (1)

○ 1-5 hours/week (2)

○ 6-10 hours/week (3)

○ 11-20 hours/week (4)

○ 21-30 hours/week (5)

○ 31-40 hours/week (6)

○ >40 hours/week (7)

○ Unknown (8)

Q36 How many dedicated hours per week does your data analyst have for antimicrobial stewardship activities in hours/week?

○ None (1)

○ 1-5 hours/week (2)

○ 6-10 hours/week (3)

○ 11-20 hours/week (4)

○ >20 hours/week (5)

○ Unknown (6)

Q37 Please select which groups have engaged with and/or support of your antimicrobial stewardship program? (Check all that apply)

- ☐ Service line chiefs and/or Department heads (1)

- ☐ Infection control and hospital epidemiology (2)

- ☐ Quality improvement staff (3)

- ☐ Laboratory staff (4)

- ☐ Information technology staff (5)

- ☐ Nurses (6)

- ☐ Pharmacy (9)

- ☐ ⊗None (7)

- ☐ Other (please specify) (8)

_____

Q39 Which interventions have you or your facility implemented to improve antibiotic use? (check all that apply)

☐ Requiring a defined duration for antibiotic prescriptions (1)

☐ Requiring indication for antibiotic prescriptions (2)

☐ Develop and implement facility specific treatment guidelines/recommendations based on national guidelines (e.g. community-acquired pneumonia guidelines or surgical prophylaxis recommendations) (3)

☐ Antibiotic "time outs" (e.g. EMR alert to review whether antibiotics are still needed at 48 or 72 hours of therapy) (4)

☐ Prior authorization - pharmacy or physician approval for select antibiotics (5)

☐ Formulary restrictions (e.g. Only certain antibiotics are on the formulary or can only be used by certain services) (6)

☐ Prospective audit and feedback (7)

☐ Automatic or actively suggested conversion from intravenous to oral antibiotic therapy for certain antibiotics (8)

☐ Pharmacist dose adjustments for organ dysfunction (e.g. deteriorating renal function) (9)

☐ Pharmacist dose optimization (e.g. Vancomycin dose adjustment, central nervous system dose adjustment) (10)

☐ Automatic alerts for duplicative therapy (e.g. Double Gram-negative or double anaerobic therapy) (11)

☐ Time-sensitive automatic stop orders for certain antibiotics orders (e.g. surgical prophylaxis antibiotics) (12)

☐ Electronic or manual detection and prevention of antibiotic-related drug-drug interactions (e.g. interactions between oral fluoroquinolones and some vitamins) (13)

Q41 How are facility-specific treatment guidelines implemented at your facility? (check all that apply)

☐ Order sets (1)

☐ Compendium of facility-specific guidelines (such as a tool book or website) (2)

☐ Individually distributed flyers/handouts (3)

☐ Other (please specify) (4)

_____

Q42 Select which order sets you or your facility use (check all that apply)

☐ Community-acquired pneumonia (1)

☐ Urinary tract infections (2)

☐ Skin and soft tissue infections (3)

☐ Empiric coverage of methicillin-resistant *Staphylococcus aureus* (MRSA) infections (4)

☐ *Clostridium difficile* infections (5)

☐ Intra-abdominal infections (6)

☐ Surgical prophylaxis (7)

☐ Other (please specify) (8)
_____

Q45 Who is responsible for audit and feedback? (check all that apply)

☐ Pharmacist (1)

☐ Physician (2)

☐ Other (please specify) (3)
_____

Q46 Do you have a mechanism in place to resolve the difference of opinion?

○ Yes (1)

○ No (2)

Q48 Which antimicrobials do you perform audit and feedback on? (check all that apply)

☐   All antimicrobials (1)

☐   High cost agents (2)

☐   Broad spectrum agents (3)

☐   Antibiotics based on alerts (4)

☐   Antibiotics with high risk for toxicity or narrow therapeutic window (e.g.
aminoglycosides) (5)

☐   Other (please specify) (6)

_____

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Q49
Tracking and Reporting Antibiotic Use

Q50 Does your hospital perform periodic assessments to determine how your providers are using antibiotics?

○ Yes (1)

○ No (2)

○ Unknown (3)

Q51 Please select which approaches you use for assessment (check all that apply)

☐ Drug use evaluations (1)

☐ Antibiotic auditing (2)

☐ Assess timeliness of antibiotic administration (3)

☐ Assess impact of antibiotic "time outs" (4)

☐ Track acceptance rates for antimicrobial stewardship interventions (5)

☐ Other (please specify) (6)

_____

☐ ⊗None (7)

Q53 Does your hospital track antibiotic utilization?

○ Yes (1)

○ No (2)

Q54 What type of measurements are collected? (check all that apply)

☐　　Days of therapy (DOT) (1)

☐　　Defined daily dose (DDD) (2)

☐　　Standardized antimicrobial administration ratio (SAAR) (3)

☐　　Other (please specify) (4)

_____

☐　　Unknown (5)

Q56 Does your facility use a commercial vendor system to monitor antimicrobial use?

○ Yes (1)

○ No (2)

Q57 Please select the commercial vendor that your facility uses from the list below.

○ Vigilanz (1)

○ Theradoc (2)

○ Meditech (3)

○ Sentri7/Wolters Kluwer (4)

○ Epic (5)

○ Cerner (6)

○ Other (please specify) (7) _____

Q58 Are you aware of the National Healthcare Safety Network's Antimicrobial Use and Resistance (AUR) Module (https://www.cdc.gov/nhsn/acute-care-hospital/aur/index.html)?

○ Yes (1)

○ No (2)

Q76 Are you aware of the fact that there is a Missouri State law that will require submission of data to this module when CMS' Meaningful Use Stage 3 regulations become mandatory (currently 2019)?

○ Yes (23)

○ No (24)

Q59 Please describe your current status with regards to implementing (i.e. submitting data in response to) the National Healthcare Safety Network (NHSN) Antibiotic Utilization and Resistance (AUR) module.

○ Not implemented, and not planning for implementation (1)

○ Not implemented, but trying to implement (2)

○ Implemented (3)

Display This Question:

If Please describe your current status with regards to implementing (i.e. submitting data in respons...
= Not implemented, and not planning for implementation

Q60 What are the barriers to implementation? (check all that apply)

☐　　　Vendor is not capable of submitting data (1)

☐　　　Cost is too high (2)

☐　　　Not a facility/ institutional priority (3)

☐　　　Lack of resources (4)

☐　　　Other (please specify) (5)

_____

Display This Question:

If Please describe your current status with regards to implementing (i.e. submitting data in respons...
= Not implemented, but trying to implement

Q62 What stage of implementation is your facility in? (check all that apply)

- ☐ Identifying if vendor is able to implement (1)

- ☐ Evaluating costs (2)

- ☐ Identifying if IT staff can work with vendor (3)

- ☐ Identifying if IT staff can implement without the need for a vendor (4)

- ☐ Vendor is in the process of implementation (5)

- ☐ IT staff are in the process of implementation (6)

- ☐ Other (please specify) (7)

  _____

Q64 Which components of the AUR Module has your facility implemented?

- ○ AU Component (1)

- ○ AR Component (2)

- ○ Both AU and AR Components (3)

- ○ Unknown (4)

- ○ Neither Component (5)

Q65 How did your facility implement your AUR reporting?

○ Through an independent vendor (1)

○ Through EMR/Pharmacy systems vendor (2)

○ Through a "homegrown" or internal implementation system (3)

○ Other (please specify) (4) _____

○ Unknown (5)

Q67 Where is antimicrobial stewardship data reported at your facility? (check all that apply)

☐ Patient safety committee (1)

☐ Pharmacy and therapeutics committee (2)

☐ Medical executive committee (3)

☐ Floor/unit leadership (4)

☐ Individual providers or hospital floors (benchmarking) (5)

☐ Other (please specify) (6)
_____

☐ ⊗ Not reported (7)

☐ Unknown (8)

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Q69
Antimicrobial Stewardship Outcome Measures

Q70 Which antimicrobial stewardship outcome measures does your antimicrobial stewardship program track? (check all that apply)

☐   *Clostridium difficile* rates (1)

☐   Antibiotic resistance rates (2)

☐   Drug cost savings (3)

☐   Adverse drug event rates (4)

☐   Patient admission/stay measures (5)

☐   None of the above (6)

Display This Question:

    If Which antimicrobial stewardship outcome measures does your antimicrobial stewardship program trac... = Clostridium difficile rates

Q71 Which *C. Diff* rates do you follow? (check all that apply)

☐ NHSN LabID Hospital Onset (HO) events (1)

☐ All NHSN LabID Defined events (2)

☐ Internal tracking of *C. Difficile* cases (3)

☐ Other (Please specify) (4)

_____

Q73 How does your facility measure antibiotic resistance?

○ Follow antibiogram trends (1)

○ Other (please specify) (2) _____

Q74 How does your facility measure costs? (check all that apply)

☐ Purchasing costs (1)

☐ Antimicrobial utilization (2)

☐ Costs of antibiotics targeted by specific stewardship intervention (3)

☐ Total hospital antimicrobial costs (4)

Q75 What kind of monitoring for adverse drug events does your facility perform? (check all that apply)

☐ Antibiotic allergies (1)

☐ Drug induced kidney injury (2)

☐ Reported adverse events (3)

☐ Other (please specify) (4)

_____

Q76 Which patient admission/stay measures does your facility monitor? (check all that apply)

☐ Length of stay (1)

☐ Readmission rates (2)

☐ Other (please specify) (3)

_____

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Q77
Education

Q78 How does your antimicrobial stewardship program provide education? (check all that apply)

☐ Best practice alerts (9)

☐ Feedback on facility-specific antibiotic prescribing trends (1)

☐ Didactic presentations (2)

☐ Educational posters and flyers (3)

☐ Educational newsletters (4)

☐ Reviewing de-identified cases in committees or meetings (5)

☐ Web-based educational resources (e.g. CDC stewardship module) (6)

☐ Other (please specify) (7)

_____

☐ ⊗None of the above (8)

Q79 Whom does your stewardship program educate? (check all that apply)

☐ Doctors (1)

☐ Mid-level providers (e.g. NP's or PA's) (2)

☐ Pharmacists (3)

☐ Nurses (4)

☐ Patients and/or family members (5)

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Q80
Facilitators and Barriers to Developing an Antimicrobial Stewardship Program

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Q81 To your knowledge, has your antimicrobial stewardship staff utilized any of the following resources? (check all that apply)

☐ State-based antimicrobial stewardship collaboratives (1)

☐ Regional or national antimicrobial stewardship collaboratives (2)

☐ Commercial telehealth support for antimicrobial stewardship (3)

☐ Antimicrobial stewardship toolkits (4)

☐ ⊗None of the above (5)

Display This Question:

If To your knowledge, has your antimicrobial stewardship staff utilized any of the following resourc...
= State-based antimicrobial stewardship collaboratives

Q84 How useful was the State-based antimicrobial stewardship collaboratives?

○ Extremely useful (2)

○ Very useful (3)

○ Moderately useful (4)

○ Slightly useful (5)

○ Not at all useful (6)

Q85 How useful was the regional or national antimicrobial stewardship collaboratives?

○ Extremely useful (2)

○ Very useful (3)

○ Moderately useful (4)

○ Slightly useful (5)

○ Not at all useful (6)

Q86 How useful was commercial telehealth support for antimicrobial stewardship?

○ Extremely useful (2)

○ Very useful (3)

○ Moderately useful (4)

○ Slightly useful (5)

○ Not at all useful (6)

Q87 Which toolkits has your facility used to facilitate implementing your antimicrobial stewardship program? (check all that apply)

☐ Centers for Disease Control (CDC) (1)

☐ The Joint Commission (2)

☐ Other (please specify) (3)

_____

Q88 How useful was the Centers for Disease Control toolkit?

○ Extremely useful (1)

○ Very useful (2)

○ Moderately useful (3)

○ Slightly useful (4)

○ Not at all useful (5)

Q89 How useful was The Joint Commission toolkit?

○ Extremely useful (1)

○ Very useful (8)

○ Moderately useful (9)

○ Slightly useful (10)

○ Not at all useful (11)

Q90 How useful was the other toolkit?

○ Extremely useful (1)

○ Very useful (2)

○ Moderately useful (3)

○ Slightly useful (4)

○ Not at all useful (5)

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Q77 **Please rate your interest level in the following antimicrobial stewardship program resources:**

Q78 Evidence-based frequently asked questions (FAQ's) that antimicrobial stewardship program pharmacists could provide to clinicians as rationale for recommendations

▼ Extremely interested (1) ... Not interested at all (5)

Q79 Protocol templates to ease paperwork burden associated with pharmacy & therapeutic committee approval of ASP interventions

▼ Extremely interested (1) ... Not at all interested (5)

Q80 ASP educational materials (PowerPoint slides/flyers/handouts) for providers, patients, nursing staff, or families

▼ Extremely interested (1) ... Not at all interested (5)

Q81 Educational materials about interpretation of rapid diagnostic tests (e.g. PBP2a, procalcitonin, etc.)

▼ Extremely interested (1) ... Not at all interested (5)

Q82 Lectures on communication strategies on how to best interact with clinicians

▼ Extremely interested (1) ... Not at all interested (5)

Q83 Access to antimicrobial stewardship experts/consultants to answer challenging questions or cases

▼ Extremely interested (1) ... Not at all interested (5)

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Q92 Please read the eight statements below. They describe barriers to implementing or improving a facility's antimicrobial stewardship program. We would like you to rank these statements in order from (1) being the largest barrier and (8) being the smallest barrier to implementing or improving your facility's antimicrobial stewardship program.   To select the largest barrier, click and drag the statement to the top of the list. To select the next largest barrier, click and drag the statement to the second position in the list. As you begin to click and drag statements, blue numbers will appear within each statement. These numbers will help you arrange the list so that the largest barrier is number 1 and the smallest barrier is number 8.

_____ Ability to personally influence change (1)
_____ Not enough time (2)
_____ Not enough resources (3)
_____ Lack of ASP promoter or leader (4)
_____ Lack of administrative support (5)
_____ Indifferent/difficult physicians (6)
_____ Insufficient evidence-based materials (7)
_____ Lack of clinical knowledge (8)

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Q74 You identified "**${Q92/ChoiceGroup/ChoiceWithLowestValue}**" as the most significant barrier to implementing or improving your antimicrobial stewardship program. Do you have suggestions about what would be most helpful to overcome this barrier?

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_____

_____

_____

_____

End of Block: Facilitators and Barriers to Developing an Antimicrobial Stewardship Program

Start of Block: Thank you

Q94 Thank you for your participation in this survey.

End of Block: Thank you