I. PURPOSE:
The purpose of this procedure is to outline the duties of the Antimicrobial Stewardship Program (ASP) medical director and ASP clinical pharmacist.

II. DEFINITIONS:
1. ASP Medical Director – Infectious Disease (ID) Physician responsible for overall direction of the program, education, and goal development. He/she will be available for direct or indirect discussion to assist physicians with antibiotic education, selection, or discontinuation.
2. Antibiotic Stewardship Program Clinical Pharmacist: Full-time Pharmacist on staff performs daily antimicrobial rounds, consults with physicians, and perform duties as assigned by ASP Medical Director and/or Director of Pharmacy.

III. STANDARDS OF PRACTICE:
A. An antimicrobial stewardship program (ASP) measures and promotes the appropriate use of antimicrobials by selecting the appropriate agent, dose, duration, and route of administration in order to improve patient outcomes, while minimizing toxicity and the emergence of antimicrobial resistance.

IV. STEPS OF PROCEDURE:
Duties of the ASP Clinical Pharmacist:
A. Review the Antibiotic Rounding Report each day.
   1. Monday through Friday the ASP clinical pharmacist will print the Antibiotic Rounding Report:
   2. Inpatient antimicrobial use will be compared to culture results. Those cases where a narrower spectrum agent could be used will be flagged and rounded on.
   3. In situations where the organism is resistant to current antimicrobial therapy, will require a phone call to the physician managing the patient's care.
   4. Antimicrobial orders will be reviewed for appropriateness, dose, frequency, and safety. Those cases where another agent would be more appropriate or safer to use will be flagged and rounded on.
   5. Antimicrobial doses and frequency will be adjusted by the ASP clinical pharmacist as needed.
   6. The ASP clinical pharmacist will go to the floors, review patient charts, and leave recommendations in the form of clinical interventions.
   7. While on the floors, the ASP clinical pharmacist will discuss the patient's antimicrobial therapy with the physicians managing the patient's care.
   8. The ASP clinical pharmacist will document all clinical interventions in Cerner. At the end of the month the clinical interventions are tallied and reported at the Antibiotic Sub-Committee meeting.

For more info about this example contact Olga DeTorres, PharmD at Olga.DeTorres@palomarhealth.org

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Example 1.2 Palomar Health ASP Policy/Procedure
(continued 2 of 3)

B. The ASP Medical Director and clinical pharmacist will develop criteria for use for all restricted antimicrobials:
   1. Criteria will be reviewed and approved the Antibiotic Sub-Committee and Pharmacy & Therapeutics Committee.
   2. Criteria for use will be listed in the Restricted Antimicrobials Procedure.

C. Review all requests for restricted antimicrobials:
   1. During working hours the ASP clinical pharmacist will be contacted whenever this is a request for a restricted antimicrobial.
   2. The ASP clinical pharmacist will review the patient's medical chart to determine if patient meets the criteria for use. If the patient meets criteria, the staff pharmacist will be notified to verify the order and dispense the drug.
   3. If the patient fails to meet the criteria for use, the ASP clinical pharmacist will recommend an alternative antimicrobial.
   4. Whenever physicians refuse to change their orders, they will be asked to obtain an Infectious Disease consult in order for the drug to be continued. Only one dose will be dispensed when the antimicrobial is ordered during the daytime. Therapy will be continued until the next morning if the antimicrobial is ordered during the evening.

D. The ASP clinical pharmacist will review all requests for new antimicrobials or vaccine:
   1. A drug monograph will be completed and presented to the Antibiotic Sub-Committee and Pharmacy & Therapeutics Committee.
   2. If a request is rejected, a letter will be sent to the physician who submitted the original request explaining why the antimicrobial or vaccine was not added to the formulary.

E. Perform Medication Use Evaluations:
   1. MUE criteria will be developed by the the ASP Medical Director and clinical pharmacist.
   2. The ASP clinical pharmacist or designee will collect and tabulate the data. A summary will be presented Antibiotic Sub-Committee meeting.
   3. The ASP Medical Director will recommend the steps needed to resolve the issues identified by the MUE.
   4. A repeat MUE is performed a year later to document the issues have been resolved.

F. Track antimicrobial usage and expenditures:
   1. The Antimicrobial Purchases Cumulative report will be tabulated and presented quarterly to the Antibiotic Sub-Committee and Pharmacy & Therapeutics Committee.
   2. The Restricted Antibiotic Report will be tabulated every two months and presented each Antibiotic Sub-Committee and Pharmacy & Therapeutics Committee meetings.
   3. The Infectious Disease Physician Prescribing report will be tabulated and presented quarterly to the Antibiotic Sub-Committee and Pharmacy & Therapeutics Committee.
   4. The Defined Daily Dose report for Gram Positive, Gram Negative, Anti-Pseudomonal, and Antifungal agents will be tabulated and presented quarterly to the Antibiotic Sub-Committee and Pharmacy & Therapeutics Committee.

G. Perform periodic review of antimicrobial susceptibility rates:
   1. The ASP clinical pharmacist and the microbiologists work together to create the yearly antibiogram for all Palomar Health facilities.
   2. The ASP Medical Director and clinical pharmacist will create empiric therapy guidelines based on antimicrobial susceptibility rates to be a part of the antibiogram.
   3. The ASP clinical pharmacist will provide lists of formulary parenteral and oral antibiotics with recommended doses and costs to be incorporated into the antibiogram.
   4. The ASP clinical pharmacist tracks the number of MRSA, VRE, ESBL, and CRE cases/1,000 PT Days and presents the report quarterly to the Antibiotic Sub-Committee.

H. Develop empiric treatment guidelines, protocols, and Power Plans to minimize the development of resistant organisms.
I. Develop antimicrobial dosing guidelines to improve patient outcomes.

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Example 1.2 Palomar Health ASP Policy/Procedure (continued 3 of 3)

J. Review all serious adverse events caused by an antimicrobial or vaccine.
K. Create procedures to prevent adverse events by antimicrobials from occurring.
L. Provide physician and staff education.

Duties of the ASP Medical Director:
A. With input from the ASP clinical pharmacist, will develop criteria for use for restricted antimicrobials.
B. Develop MUE criteria with the ASP clinical pharmacist.
   1. After the MUE is completed, the ASP Medical Director will recommend the steps needed to resolve the issues identified by the MUE.
C. Create empirical therapy guidelines based on antimicrobial susceptibility rates that will be published in the antibiogram.
D. Develop empirical treatment guidelines and protocols to minimize the development of resistant organisms.
E. Provide physician and staff education:
   1. Give presentations at department meetings and Medical Grand Rounds on Antibiotic Stewardship issues.
   2. Will meet with physicians who refuse to comply with Antibiotic Stewardship procedures and guidelines and provide them with one-on-one education.
   3. Give lectures to the pharmacists on treatment of common infections
   4. Take pharmacy residents on rounds during their Infectious Disease rotation.

V. PUBLICATION HISTORY:

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<th>Revision Number</th>
<th>Effective Date</th>
<th>Document Owner at Publication</th>
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VI. REFERENCES:

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<th>Title</th>
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