EXHIBIT 9-17. ANTIMICROBIAL MANAGEMENT PROGRAM: GAP ANALYSIS

Executive Ownership	Y	N	Comments
Senior leadership is supportive of program and necessary requirements to meet resource needs			
Process exists to review medical staff participation in hospital quality initiatives			
Medical staff process exists to monitor compliance to quality programs - Process exists to evaluate outliers			

Process exists to evaluate critical staffing needs for quality programs
  - Central Order Entry (Supply Chain sponsored program) has been retained as a method for
    pharmacist redeployment, for clinical programs as opposed to staff reduction
  - Microbiology services are readily available
  - Infection Prevention staff are readily available
  - Education time and resources are protected and provided to support programs-i.e. AMP development			

Information Technology	Y	N	Comments
IT resources are dedicated to the implementation of Non Programmed Reports (NPR) in EHR for clinical use for all departments			

Pharmacy has an available staff member trained and dedicated to electronic formulary maintenance and decision support
  - Commments   - Rule development (Automatic Stop Orders)   - Clinical reminders
  - Order set development - Triggers (Clinical Reminders) - Lab view groups			

Decision support strategy is integrated across departments			
Staff Development	Y	N	Comments
Programs exist to train current staff on antimicrobial stewardship - IV to PO conversion - Renal dose adjustment - Streaming principles			
Training hours are allocated to support staff development			
AMP Compentencies incorporated into initial 3 months and annual pharmacist evaluations			
IV to PO Conversion Program	Y	N	Comments
Medical staff approved policy and procedure in place for pharmacist authorized automatic conversion of IV medications to bioequivalent PO given appropriate indications			

IV to PO policy include the following agents:
  - Quinolones   - Voriconizole   - Fluconazole   - TMP/SMX   - Linezolid
  - Clindamycin doses less than 600mg IV - Metronidazole			

Pharmacists have completed competency assessment and training prior to participation and whenever policy or procedure changes made and at least annually			
A method exists to identify eligible patients Examples: - Case management report - Drug tracer report - Patient profile reviews			

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IV to PO Conversion Program (continued)	Y	N	Comments
IV to PO is an accepted and supported program by key stakeholders - Nurses - Physicians - Case Managers - Pharmacists			
Cost savings are assigned to IV and PO interventions and incorporated as part of AMP metrics			

IV to PO interventions are documented in EHR and reported through appropriate group(s):
   - Medical Executive Committee to monitor compliance
   - Hospital Performance Improvement (PI)/Continuous Quality Improvement (CQI) Committee
   - Pharmacy PI
   - Supply Cost Management Action Team (SMAT)			

Approved medications are reviewed at least annually by medical staff			
IV to PO program is incorporated into Care Coordination Initiative			
Renal Dosing (RD) Adjustment Program	Y	N	Comments
Medical staff approved policy and procedure in place for pharmacist authorized dosing adjustment for selected antimicrobials			

Renal dosing adjustment policy include the following agents based on formulary:
   - Quinolones - Amipicillin - Cefuroxime - Ertapenem - TMP/SMX - Fluconazole - Aztreonam
   - Ceftazidime - Meropenem - Unasyn - Acyclovir - Cefazolin - Cefepime - Primaxin - Zosyn			

Pharmacists have completed competency assessment and training prior to participation and whenever policy or procedure changes made			
Pharmacists have completed competency assessment prior to participation and whenever policy or procedure changes made and at least annually			
A method exists to identify eligible patients Examples: - Serum Creatinine (SCr) report - Drug tracer report - Patient profile reviews			
RD is an accepted and supported program by key stakeholders: - Nurses - Physicians - Case Managers - Pharmacists			
Cost savings are assigned to RD interventions and incorporated as part of AMP metrics			

RD interventions are documented in EHR and reported through appropriate group(s):
   - Medical Executive Committee to monitor compliance
   - Hospital Performance Improvement (PI)/Continuous Quality Improvement (CQI) Committee
   - Pharmacy PI
   - Supply Cost Management Action Team (SMAT)			

Approved medications are reviewed at least annually by medical staff			
Renal program is incorporated into Care Coordination Initiative			

EXHIBIT 9-17. ANTIMICROBIAL MANAGEMENT PROGRAM: GAP ANALYSIS

Criteria for Use Antimicrobials	Y	N	Comments

Medical staff approved policy and procedure that identifies criteria-based antimicrobials and defines criteria for use
    Recommend to include: Echinocandins, linezolid, tigecycline, daptomycin, Synercid, IV itraconazole,
    drotrecogin, alfa, liposomal amphotercin B			

A method exists to identify eligible orders Examples: - Required order sheet - Mandatory pharmacist review - Criteria check sheet - Patient profile reviews - EHR solutions (i.e. Dictionary/Formulary comments)			
An annual review is required for all criteria for use medications			
Criteria for Use policy is accepted and supported by key stakeholders: - Physicians - Pharmacists - Case Managers - Nurses			

Criteria for use interventions are documented in EHR and reported through appropriate group(s):
  - Medical Executive Committee to monitor compliance
  - Hospital Performance Improvement (PI)/Continuous Quality Improvement (CQI) Committee
   (i.e. Infection Prevention, Pharmacy and Therapeutics, Quality)
  - Pharmacy PI
  - Supply Cost Management Action Team (SMAT)			

Criteria are reviewed at least annually and approved by medical staff			
Formulary Review	Y	N	Comments
Annual review of formulary antimicrobials performed with considerations including clinical and financial metrics			
Formulary inclusion based on microbiology/sensitivity data, medication clinical profile, financial and safety data			

Medical staff approved policy and procedure in place for pharmacist authorized therapeutic interchanges for the following agents:
  - Quinolones   - Carbapenems   - Ceftazidime/Cefepime   - Ceftriaxone/Cefotaxime
  - Cefoxitin/Cefotetan - Timentin/Zoysn - Cefazolin q 6 hr to Cefazolin q 8 hr - Macrolides			

Pharmacodynamic dosing of select drugs has been implemented (i.e. piperacillin/tazobactam (Zosyn 3.375 gm q8 hr over 4 hours vs. 4.5 gm IV q 6 hr)			

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Antibiogram and Culture and Sensitivity Reporting	Y	N	Comments
Antibiogram is developed in accordance with Clinical and Laboratory Standards Institute (CLSI) standards and updated at least annually			
A method for distribution of antibiogram to medical staff is in place and readily available at point of prescribing			
Sensitivity reporting is based on current CLSI recommendations			
Culture and Sensitivity report lists antibiotics in order of increasing spectrum of activity and not alphabetical (i.e. 1st generation is reported before 3rd generation cephalosporin)			
Antibiotic sensitivity is suppressed according to CLSI cascading recommendations			
Culture and Sensitivity reporting recommendations are approved by appropriate medical staff			
Activity trending data is reported beyond facility (to Division and HealthTrust Purchasing Group)			
Medical staff approved Empiric Antimicrobial Treatment Guidelines in place for most common infections For example: Upper and Lower respiratory, Gastrointestinal, Genitourinary, Skin/Soft Tissue, Bone and Joint, CNS infections			
Empiric antimicrobial guidelines are tailor to facility specific antibiogram			
A method is in place to have guidelines readily available to medical staff at point of prescribing Examples: - Required order sheet - Criteria check sheet			
Empiric guidelines are incorporated into ePOM (CPOE) (i.e. physician favorites to treat specific infections)			
An annual review is required to assess adherence to empiric guidelines and reflect treatment outcome			
Empiric Antimicrobial guidelines are accepted and supported by key stakeholders: - Physicians - Pharmacists - Case Managers - Nurses			
Empiric antimicrobial treatment interventions are documented in EHR and reported through appropriate group(s): - Medical Executive Committee to monitor compliance - Hospital Performance Improvement (PI)/Continuous Quality Improvement (CQI) Committee (i.e. Infection Prevention, Pharmacy and Therapeutics, Quality) - Pharmacy PI - Supply Cost Management Action Team (SMAT)			
Guidelines are reviewed at least annually and approved by medical staff			

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Antimicrobial Streamlining	Y	N	Comments
Appropriate staff are identified to perform daily function			
A method is in place to identify patients:			
- Antimicrobial agents for a period longer than _____ (suggest 48 or 72 hours) with negative culture			
- Patients with positive culture regardless of presence of antimicrobial order			
Medical staff approved procedure in place identifying preferred method of pharmacist intervention			
- Discussion with prescriber - Note in chart			
- Referral to AMP team - Electronic reminder (i.e. duration of therapy guidance)			
Streamlining is an accepted and supported program by key stakeholders:			
- Physicians - Pharmacists - Case Managers - Nurses			
Cost savings are assigned to Streamlining interventions and incorporated as part of AMP metrics			
Pharmacists have competed compentency assessment and training prior to participation and at least annually			
Staffing schedule allows time for pharmacist to evaluate and make streamlining recommendation			
Streamlining interventions are documented EHR and reported through appropriate group(s):			
- Medical Executive Committee to monitor compliance			
- Hospital Performance Improvement (PI)/Continuous Quality Improvement (CQI) Committee			
- Infection Prevention Committee			
- Pharmacy PI			
Duration of Antimicrobial Therapy Monitoring	Y	N	Comments
Medical staff approved Duration of Antimicrobial Treatment Guidelines in place for most common infections For example: Upper and Lower respiratory, Gastrointestinal, Genitourinary, Skin/Soft Tissue, Bone and Joint, CNS infections			
Appropriate staff are identified to perform daily function			
A method is in place to identify patients:			
- Antimicrobial agents for a period longer than _____ (suggest 7-10 days)			
Medical staff approved procedure in place identifying preferred method of pharmacist intervention			
- Discussion with prescriber - Note in chart - Referral to AMP team			
- Electronic reminder (i.e. duration of therapy guidance) - Preprinted order forms			
Duration of Antimicrobial Therapy monitoring is an accepted and supported program by key stakeholders:			
- Physicians - Pharmacists - Case Managers - Nurses			
An annual review is required to assess adherence to empiric guidelines and show treatment outcome			
Cost savings are assigned to duration of therapy interventions and incorporated as part of AMP metrics			

EXHIBIT 9-17. ANTIMICROBIAL MANAGEMENT PROGRAM: GAP ANALYSIS

Duration of Antimicrobial Therapy Monitoring (continued)	Y	N	Comments
Pharmacists have competed compentency assessment and training prior to participation and at least annually			
Staffing schedule allows time for pharmacist to evaluate and make streamlining recommendation			

Duration of therapy interventions are documented EHR and reported through appropriate group(s):
  - Medical Executive Committee to monitor compliance
  - Hospital Performance Improvement (PI)/Continuous Quality Improvement (CQI) Committee
  - Infection Prevention Committee
  - Pharmacy PI
  - Supply Cost Management Action Team (SMAT)			

Guidelines are reviewed at least annually and approved by medical staff			
Duration of Antimicrobial Therapy monitoring is incorporated into Care Coordination Initiative			
Utilization Reviews	Y	N	Comments
Appropriate antibiotics chosen to review in accordance with Criteria for Use and Targeted Medication policies			
Target infections chosen to review adherence to empiric antimicrobial guidelines and reflect treatment outcome			
Target infections chosen to review adherence to duration of antimicrobial therapy guidelines and show treatment outcome			
Recommendations from review are presented to and approved by medical staff			

Results and recommendations reported to appropriate groups:
  - Medical Executive Committee to monitor compliance
  - Hospital Performance Improvement (PI)/Continuous Quality Improvement (CQI) Committee
   (i.e. Infection Prevention, Pharmacy and Therapeutics, Quality)
  - Pharmacy PI
  - Supply Cost Management Action Team (SMAT)			

A method exists to monitor adherence to utilization review recommendations within 12 months of initial review			
Metrics	Y	N	Comments

A method exists to capture the following metrics:
  - Defined daily dose (DDD) per 1000 patient days - Antimicrobial expenditures
  - Antimicrobial susceptibilities - AMP intervention acceptance rates
  - DRG based length of stay - Other related metrics as defined by facility or division			