P&T COMMITTEE ACTIONS
POLICY UPDATE
Multi-dose Vials (MDV) and Beyond
Use Dating Policy
The misuse of MDV has caused outbreaks of infections, including hepatitis B and C, meningitis, and epidural abscesses. This led the Joint Commission to issue sentinel alert #52 to restrict MDV usage. At PTMC, MDV will be dispensed for single patient use only. PPD skin tests are one of the few exceptions.

DRUG SHORTAGE!!
The ASHP Drug Shortage “QuickLinks” is on the front page of the hospital intranet:
http://www.ashp.org/DrugShortages/Current/

Current Shortages Impacting PTMC
- Zosyn® injection
- Vasopressin injection
- Digoxin injection
- Vecuronium injection
- Hydralazine injection
- Famotidine (Pecid®) injection

MEDICATION SAFETY
Epidural and Anticoagulants Black Box Warning
When this sign (pictured at left) is posted at the head of the bed in a patient’s room, it is an alert that the patient has an epidural catheter. The FDA has received many reports of spinal column bleeding and subsequent paralysis after spinal injections, and lumbar punctures while patients are taking concurrent anticoagulants such as Lovenox® and Xarelto®. Epic alerts physicians with a yellow pop up screen when a patient has an epidural catheter and anticoagulants are ordered or vice versa. The FDA recommends considering the
timing of spinal catheter placement & removal in relation to the dosing of anticoagulants.

ANTIMICROBIAL STEWARDSHIP

Procalcitonin (PCT) Laboratory Test
By Natalie Niloofar Hajian, Pharm. D. & MBA
Pharmacy Resident

Beginning January 2015, the procalcitonin lab test will be available in-house at Providence Tarzana Medical Center (PTMC) and results will be accessible on Epic. Procalcitonin (PCT) is an amino acid precursor of calcitonin which is produced under circumstances of inflammation, including bacterial infections. Levels are not elevated in pure viral infections. PCT serum levels are proportionally elevated to the severity of infection and serial testing can be utilized to indicate if the infection is resolving with antibiotic use. PCT-guided treatment has been shown to reduce the duration of antimicrobial therapy without increasing mortality rate. A study at Providence Regional Medical Center Everett (PRMCE) found the PCT-guided therapy protocol for patients with pneumonia resulted in avoiding 235 days of antibiotic therapy and decreased length of stay. The estimated total cost avoidance was $385,400 for the year.

The PTMC Antimicrobial Stewardship team of pharmacists and Infectious Disease physicians will be ordering PCT tests as appropriate for patients with the following indications per hospital policy:

- Sepsis
- Pneumonia
- COPD (Acute exacerbation)
- Complicated UTI
- Meningitis
- Suspected viral infection

Providence PCT algorithm for Stewardship

<table>
<thead>
<tr>
<th>Levels (µg/L)</th>
<th>Bacterial etiology</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 0.1</td>
<td>Very unlikely</td>
<td>NO antibiotics</td>
</tr>
<tr>
<td>0.1-0.25</td>
<td>Unlikely</td>
<td>No antibiotics</td>
</tr>
<tr>
<td>&gt;0.25-0.5</td>
<td>Likely</td>
<td>Antibiotics yes</td>
</tr>
<tr>
<td>&gt; 0.5</td>
<td>Very likely</td>
<td>Antibiotics YES!</td>
</tr>
</tbody>
</table>

The PCT results will be used to assess the appropriateness of broad spectrum antibiotics and to recommend possible shorter duration or discontinuation of antibiotics. The Antimicrobial Stewardship team will post sticky notes to the prescriber in Epic for possible interventions and looks forward to working with the PTMC medical staff to help decrease antimicrobial use.

Probiotic Protocol

Recent clinical evidence suggests that the use of probiotics in patients receiving antibiotic may significantly reduce the incidence of c. difficile associated diarrhea (CDAD) (Annals of Internal Medicine 2012;157:878-888 by Johnston et. al)

The PTMC ASP team will initiate probiotics (Florajen) per protocol for patients who start on antibiotic therapy in the hospital within 72 hours and fulfill one of the following high risk criteria:

- Age > 70 years
- Admitted from skilled nursing facility
- History of recurrent or previous CDAD
- Previous hospitalization within 30 days of admission

Patients will be excluded if 1) currently on antibiotic from home 2) critically ill or severely debilitated (CVICU, ICU) 3) immune-compromised or receiving immunosuppressants 4) have a history of gastrointestinal surgery 5) have a history of intestinal parasitic disease or are 6) pregnant.

Aztreonam (Azactam®)

Medication Utilization Review (MUE)

Review of aztreonam use during the month of October found that 77% of patients who received aztreonam did not have a documented severe penicillin allergy.

The P&T committee recommended: in the absence of documented Type-1 immediate sensitivity to penicillin, reserve aztreonam and use the “alternative” recommended antibiotics in the PTMC Empiric Antibiotic Guideline such as meropenem, levofoxacin, or cephalosporin. Second page of Antibiogram PTMC intranet link http://in.providence.org/ca/facilities/ptmc/departments/rxportal/rx/Documents/Antibiogram/Antibiogram%202013%20-%20emp%20Abx%20Guideline%202010-2014.pdf

The Literature reports a very low cross-sensitivity between penicillin and cephalosporin (1 – 5%) and even lower cross sensitivity with meropenem (1%).

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