Houston Antimicrobial Stewardship Symposium 2017

Metrics Session

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Utilization Metrics

- DOT/ DDD 1000 pt days
  - Aggregate
  - Top 10
- DOT/1000 pt days present (AU module)
- DDD/1000 pt days
- IV to PO Percentage or Percentage PO
- Length of therapy (LOT)/1000 pt days
- Number of patients on antibiotics (express as a %)
  - Day
  - Per admission
- MS DRG relation
  - Utilization by Service Lines/Top MS DRGs
  - Consider DRG Groupings (Clin Infect Dis 2011;53(11):1100-10.)
- % admissions that received certain antibiotics
- Point prevalence study – looking at what is happening house wide at a pre-selected time
- DOT by provider
- Average LOT for specific antibiotics
- % of therapy appropriate indication or ICD9/10 codes
- % of time empiric therapy was appropriate for a certain indication
- Choice/Change/Completion – looking at empiric, narrow, complete therapy
- DOT/LOT

Financial Metrics

- Antibiotic cost per patient day
- Antibiotic cost per adjusted patient day
- Antibiotic cost (%) to total drug budget
- Total spend
- Wastage - % wastage for specific drugs
- Antibiotic cost per discharge
- Antibiotic cost per admissions
- CMI adjusted – data shows not much different
- Cost per MS DRG (ID related)
- Cost per length of stay
- Cost due to readmissions
Process Measures

- Interventions
  - Renal dosing
  - IV to PO
  - De escalation
  - Therapy cessation
  - Measure acceptance rates
- Percent ordered per protocol/guidelines
- Culture collected before antimicrobial being administered
- Intervention acceptance rate
- # interventions per patients reviewed
- Average number of interventions per patient reviewed
- Redundant therapy events – e.g. duplicate therapy
- % orders with start and stop date
- MSSA and receiving a beta lactam
- Compliance to best practice bundles

Prescriber Metrics

- Drug utilization by prescriber
  - Debate about whether to blind info or use name
  - Challenge when you can only get attending physician’s name. When at academic medical center, consider by service
- Percent of orders for antimicrobials that required action
- Acceptance rates
- ID physician consult rates

Outcome Metrics

- Resistance rates
- Clostridium difficile rates
- Balancing measure – pts that were de-escalated that were then escalated

Quality /Safety Measurement

- Percent of time diseases specific order set was used
- Adverse drug events reported
- Time to appropriate therapy
- Time to therapeutic concentrations
- Adverse drug event rates
- Time to appropriate antibiotic therapy
- Time to PO conversion
- CLABSI rates
- Mortality
- PICC line complications