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| **Lower Umpqua Asymptomatic Bacteriuria (ASB) Report**Date of Report: April 2024\*\*This data report is based on cases submitted from September 2023 – March 2024 and does not include previous data.  |

**Inappropriate Diagnosis of UTI measure**



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| **Average across hospitals in cohort: 34.5% ; HMS Hospital Average\*: 23.2%****Inappropriate Diagnosis of UTI measure:** $\frac{Number of patients treated for ASB}{Number of positive urine cultures treated (UTI+ASB)}$* **Goal:** lower % = better
* You can lower this number by either reducing unnecessary urine cultures **(diagnostic stewardship)** or reducing antibiotic treatment when unnecessary cultures are obtained **(antibiotic stewardship)**

\*The HMS hospital average was amongst 46 hospitals in the Michigan Hospital Medicine Safety Consortium that participated in a similar quality improvement study.  |
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**Prevalence and Treatment Rate of ASB**

**Prevalence of ASB:**

$$\frac{Number of treated ASB cases}{Number of ASB cases}$$

 **Treatment Rate**

 **of ASB:**

$$\frac{Number of ASB cases}{Number of positive urine cultures}$$

Data submissions

Total cases (positive urine cultures) included for your site: 29

Cases included per month for your site (median & IQR): 4.5 (4-5)

Prevalence of ASB

Prevalence of ASB across hospitals: 164 of 390 (42.1%)

Prevalence of ASB at your site: 15 of 29 (51.7%)

Treatment Rate of ASB

Treatment rate of ASB in overall cohort: 106 of 164 (64.6%)

Treatment rate of ASB at your site: 13 of 15 (86.7%)

**Antibiotic Tables**

| **Table 1: Three Most Common Antibiotics comparing UTI & ASB** |
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|  **IV** |  **Oral** |
|  **UTI, n= 3** | **ASB, n = 8** | **UTI, n=15** | **ASB, n = 11** |
| Ceftriaxone (n=3) | Ceftriaxone (n=4) | Nitrofurantoin (n=5) | Nitrofurantoin (n=3) |
| NA | Pip-tazo (n=1) | Tri-sulfa (n=4) | Cephalexin (n=3) |
| NA | Vancomycin (n=1) | Amoxicillin (n=2) | Cefpodoxime (n=2) |

| **Table 2: Antibiotic Duration (days)** |  **UTI** |  **ASB** |
| --- | --- | --- |
| **Prior, n=13** | **This Month, n=1** | **Prior, n=12** | **This Month, n=3** |
| Total Antibiotic Duration; median (IQR) | 7 (5-10) | 5 (5-5) | 4 (2.75-7) | 7 (4-9.5) |
| Number of Cases Receiving >7 days; n (%) | 6 (46.2%) | 0 | 2 (16.7%) | 1 (33.3%) |

Prior is Sept 2023 – Jan 2024 & this month is March 2024

| **Table 3: Characteristics comparing this month to prior n (%)** |  **UTI** |  **ASB** |
| --- | --- | --- |
| **Prior, n=13** | **This Month, n=1** | **Prior, n=12** | **This Month, n=3** |
| **Setting where culture obtained** |
|  ED, then admitted | 0 | 0 | 2 (16.7%) | 0 |
|  ED, then discharged | 3 (23.1%) | 0 | 8 (66.7%) | 2 (66.7%) |
|  Ambulatory care clinic | 4 (30.8%) | 0 | 0 | 0 |
|  Inpatient | 0 | 0 | 2 (16.7%) | 1 (33.3%) |
|  Other | 6 (46.2%) | 1 (100%) | 0 | 0 |
| From reflex test | 7 (53.8%) | 0 | 11 (91.7%) | 3 (100%) |
| Men | 4 (30.8%) | 0 | 3 (25%) | 1 (33.3%) |
| Age >75  | 5 (38.5%) | 0 | 6 (50%) | 0 |
| Acute altered mental status changes alone | 0 | 0 | 1 (8.3%) | 1 (33.3%) |

**Characteristic Tables**

Prior is Sept 2023 - Jan 2024 & this month is March 2024

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| --- | --- | --- |
| **Table 4: Prescribing Characteristics** |  **UTI** |  **ASB** |
| **Prior, n=13** | **This Month, n=1** | **Prior, n=12** | **This Month, n=3** |
| **Top 3 Prescriber IDs (if available)** |  |
|  | 2 ( n=6) | 2 (n=1) | 1 (n=5) | 3 (n=1) |
| 22 (n=2) | 0 | 3 (n=3) | 4 (n=1) |
| 3 (n=2) | 0 | 11 (n=2) | 8 (n=1) |
| **Prescriber type, n (%)** |  |
| Physician | 11 (84.6%) | 1 (100%) | 12 (100%) | 3 (100%) |
| Physician Assistant | 0 | 0 | 0 | 0 |
| Nurse Practitioner | 2 (15.4%) | 0 | 0 | 0 |
| **Contract of prescribing provider, n (%) (if available)** |  |
| Employed by hospital | 10 (76.9%) | 1 (100%) | 4 (33.3%) | 1 (33.3%) |
| Contracted from outside group/locum | 3 (23.1%) | 0 | 8 (66.7%) | 2 (66.7%) |
| Not sure | 0 | 0 | 0 | 0 |

Prior is Sept 2023 - Jan 2024 & this month is March 2024

**Case IDs for the treated ASB cases**

"4" "7" "6" "11" "12" "20" "27" "29" "34" "35" "37" "39" "40"

**Key Terms and Definitions**

* Positive urine culture: Any growth on culture
	+ Prevalence of ASB: A positive urine culture without any documented signs or symptoms attributable to urinary tract infection per National Hospital Safety Network (NHSN) and Infectious Diseases Society of America (IDSA) Guidelines.
* Signs or symptoms of UTI includes:
* Fever (>38°C)
* Suprapubic tenderness
* Costovertebral angle pain or tenderness
* Urinary urgency
* Urinary frequency
* Dysuria
* Altered Mental Status + 2 or more SIRS criteria
* Treatment rate of ASB: antibiotic treatment for ASB

**Action items/Insight**:

Based on the Inappropriate Diagnosis of UTI Measure, your hospital is a performing **below average** in terms of percentage of UTI cases that were actually ASB. Please continue to try and work on improving this. Additional comments:

* **Met case submission requirement:** Great job submitting cases! Celebrate this success!
* **High Treatment of ASB:** Among the patients that have ASB, your clinicians are still showing a tendency to treat (83.3%). Would recommend focusing on this. If convincing clinicians to stop prescribing antibiotics for ASB is a challenge at your hospital, it might be easier to suggest shorter durations (eg. 3 days) for patients without symptoms. This might be a compromise or intermediate step to help clinicians be comfortable with less antibiotics for these patients.
* **High Treatment Rate with Preferred Antibiotics:** Among patients with both UTI and ASB, nitrofurantoin, trimethoprim-sulfamethoxazole, and narrow-spectrum beta-lactams (amoxicillin, cephalexin) are most common. Notably, fluoroquinolones (like ciprofloxacin and levofloxacin) are not highly-utilized agents – this is worth celebrating!
* **Long Treatment Duration:** Treatment duration for UTI remains high (with 50% of cases receiving more than 7d of therapy from Sept 2023 – Jan 2024). This is an area on which you could focus to help reduce overall antibiotic use. Notably, the treatment duration appears shorter for cases of ASB.