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

**Inappropriate Diagnosis of UTI measure**



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| **Average across hospitals in cohort: 35.6% ; 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**

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

**Prevalence of ASB:**

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

 **Treatment Rate**

 **of ASB:**

Data submissions

Total cases (positive urine cultures) included for your site: 45

Cases included per month for your site (median & IQR): 4.5 (3.25-5.75)

Prevalence of ASB

Prevalence of ASB across hospitals: 356 of 868 (41.0%)

Prevalence of ASB at your site: 18 of 45 (40%)

Treatment Rate of ASB

Treatment rate of ASB in overall cohort: 266 of 356 (74.7%)

Treatment rate of ASB at your site: 12 of 18 (66.7%)

Previous treatment rate at your site (from ASB 101 cohort): 16 of 16 (100%)

**Antibiotic Tables**

| **Table 1: Three Most Common Antibiotics comparing UTI & ASB** |
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|  **IV** |  **Oral** |
|  **UTI, n = 6** | **ASB, n = 6** | **UTI, n = 20** | **ASB, n =13** |
| Ceftriaxone (n=5) | Ceftriaxone (n=6) | Cephalexin (n=6) | Cephalexin (n=4) |
| Levofloxacin (n=1) |  | Nitrofurantoin (n=6) | Ciprofloxacin (n=2) |
|  |  | Trim-sulfa (n=2) | Nitrofurantoin (n=2) |

| **Table 2: Antibiotic Duration (days)** |  **UTI** |  **ASB** |
| --- | --- | --- |
| **Prior, n=25** | **This Month, n=2** | **Prior, n=15** | **This Month, n=3** |
| Total Antibiotic Duration; median (IQR) | 7 (3-8) | 5 (2.5-7.5) | 6 (0.5-7) | 0 (0-3.5) |
| Number of Cases Receiving >7 days; n (%) | 7 (28%) | 1 (50%) | 2 (13.3%) | 0  |

Prior is Sept 2023 - May 2024 & this month is June 2024

| **Table 3: Characteristics comparing this month to prior n (%)** |  **UTI** |  **ASB** |
| --- | --- | --- |
| **Prior, n=25** | **This Month, n=2** | **Prior, n=15** | **This Month, n=3** |
| **Setting where culture obtained** |
|  ED, then admitted | 1 (4%) | 0 | 3 (20%) | 1 (33.3%) |
|  ED, then discharged | 11 (44%) | 2 (100%) | 12 (80%) | 2 (66.7%) |
|  Ambulatory care clinic | 7 (28%) | 0 | 0 | 0 |
|  Inpatient | 0 | 0 | 0 | 0 |
|  Other | 6 (24%) | 0 | 0 | 0 |
| From reflex test | 15 (60%) | 2 (100%) | 13 (86.7%) | 1 (33.3%) |
| Men | 4 (16%) | 1 (50%) | 6 (40%) | 0 |
| Age >75  | 9 (36%) | 1 (50%) | 8 (53.3%) | 2 (66.7%) |
| Acute altered mental status changes alone | 1 (4%) | 1 (50%) | 3 (20%) | 1 (33.3%) |

**Characteristic Tables**

Prior is Sept 2023 - May 2024 & this month is June 2024

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| --- | --- | --- |
| **Table 4: Prescribing Characteristics** |  **UTI** |  **ASB** |
| **Prior, n=25** | **This Month, n=2** | **Prior, n=15** | **This Month, n=3** |
| **Top 3 Prescriber IDs (if available)** |  |
|  | 10169 (n=4) | 10145 (n=1) | 10102 (n=4) | 10102 (n=2) |
| 10102 (n=3) | 10497 (n=1) | 10145 (n=3) | 10169 (n=1) |
| 46020 (n=3) |  | 89377 (n=3) |  |
| **Prescriber type, n (%)** |  |
| Physician | 19 (76%) | 2 (100%) | 15 (100%) | 3 (100%) |
| Physician Assistant | 5 (20%) | 0 | 0 | 0 |
| Nurse Practitioner | 1 (4%) | 0 | 0 | 0 |
| **Contract of prescribing provider, n (%) (if available)** |  |
| Employed by hospital | 17 (70.8%) | 1 (50%) | 10 (66.7%) | 3 (100%) |
| Contracted from outside group/locum | 7 (29.2%) | 1 (50%) | 3 (20%) | 0 |
| Not sure | 0 | 0 | 2 (13.3%) | 0 |

Prior is Sept 2023 - May 2024 & this month is June 2024

**Case IDs for the treated ASB cases**

"130322290" "130322417" "130322439" "130324126" "130336310" "130336461"

"130338192" "130340072" "130344012" "130346018" "130332751" "130356152"

**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 **right** **at the cohort average** in terms of percentage of UTI cases that were actually ASB. However, **your site has continued to show significant improvement**! Additional comments:

**Positives to Highlight**:

* **Met case submission requirement:** Great job submitting cases! Celebrate this success!
* **Down trend in ASB treatment rate:** Throughout the year, your treatment rate of ASB has trended down. In IQIC 101 and the first data report, your treatment rate was 100%. Although this number is still high, you have decreased to it to 82% on the last report and now to 67% this report. Work to maintain this momentum!
* **High nitrofurantoin and cephalosporin use:** Less harmful/more narrow therapy use is high at your site! Great job! Minimal fluoroquinolone use on the report is awesome.
* Although numbers are low, **antibiotic durations** for both UTI and ASB **are trending down**.

**Areas of Improvement**:

* **Location and patient characteristics:** Table 3 suggests ASB is more commonly treated in the emergency department and among those with acute altered mental status changes alone. These may be high-yield targets for stewardship interventions.