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| **Coulee 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: 176

Cases included per month for your site (median & IQR): 17 (16-20)

Prevalence of ASB

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

Prevalence of ASB at your site: 48 of 176 (27.3%)

Treatment Rate of ASB

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

Treatment rate of ASB at your site: 35 of 48 (72.9%)

Previous treatment rate at your site (from ASB 101 cohort): 27 of 32 (84%)

**Antibiotic Tables**

| **Table 1: Three Most Common Antibiotics comparing UTI & ASB** |
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|  **IV** |  **Oral** |
|  **UTI, n = 6** | **ASB, n = 7** | **UTI, n = 125** | **ASB, n =35** |
| Ceftriaxone (n=6) | Ceftriaxone (n=7) | Nitrofurantoin (n=74) | Nitrofurantoin (n=19) |
|  |  | Trim-sulfa (n=24) | Ciprofloxacin (n=4) |
|  |  | Cephalexin (n=7) | Trim-sulfa (n=4) |

| **Table 2: Antibiotic Duration (days)** |  **UTI** |  **ASB** |
| --- | --- | --- |
| **Prior, n=114** | **This Month, n=14** | **Prior, n=45** | **This Month, n=3** |
| Total Antibiotic Duration; median (IQR) | 5 (5-7) | 5 (3.5-5) | 5 (0-7) | 5 (2.5-5) |
| Number of Cases Receiving >7 days; n (%) | 18 (15.8%) | 1 (7.1%) | 8 (17.8%) | 0 (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=114** | **This Month, n=14** | **Prior, n=45** | **This Month, n=3** |
| **Setting where culture obtained** |
|  ED, then admitted | 1 (0.9%) | 0 | 3 (6.7%) | 0 |
|  ED, then discharged | 21 (18.4%) | 4 (28.6%) | 26 (57.7%) | 2 (66.6%) |
|  Ambulatory care clinic | 92 (80.7%) | 10 (71.4%) | 15 (33.3%) | 1 (33.3%) |
|  Inpatient | 0 | 0 | 1 (2.2%) | 0 |
|  Other | 0 | 0 | 0 | 0 |
| From reflex test | 33 (28.9%) | 4 (28.6%) | 33 (73.3%) | 3 (100%) |
| Men | 14 (12.3%) | 2 (14.3%) | 14 (31.1%) | 0 |
| Age >75  | 31 (27.2%) | 2 (14.3%) | 12 (26.7%) | 0 |
| Acute altered mental status changes alone | 0 | 0 | 5 (11.1%) | 0 |

**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=114** | **This Month, n=14** | **Prior, n=45** | **This Month, n=3** |
| **Top 3 Prescriber IDs (if available)** |  |
|  | H (n=72) | H (n=10) | H (n=12) | A (n=1) |
| E (n=6) | A (n=1) | K (n=9) | E (n=1) |
| K (n=6) | E (n=1) | B (n=6) | J (n=1) |
| **Prescriber type, n (%)** |  |
| Physician | 13 (11.4%) | 1 (7.1%) | 10 (22.2%) | 2 (66.7%) |
| Physician Assistant | 8 (7.0%) | 2 (14.3%) | 9 (20%) | 1 (33.3%) |
| Nurse Practitioner | 93 (81.6%) | 11 (78.6%) | 26 (57.8%) | 0 |
| **Contract of prescribing provider, n (%) (if available)** |  |
| Employed by hospital | 36 (31.6%) | 3 (21.4%) | 28 (62.2%) | 3 (100%) |
| Contracted from outside group/locum | 78 (68.4%) | 11 (78.6%) | 17 (37.8%) | 0 |
| Not sure | 0 | 0 | 0 | 0 |

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

**Case IDs for the treated ASB cases**

"#908" "#920" "#924" "#926" "#1000" "#1008" "#1013" "#1110" "#1121" "#1126" "1210" "1217" "1218" "1227" "1231"

"#0113" "#0114" "204" "213" "216" "218" "221" "306" "317" "318" "320" "321" "322" "403" "414" "415"

"436" "518" "529" "530"

**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 **better than average** in terms of percentage of UTI cases that were actually ASB.

Additional comments:

**Positives to Highlight**:

* **Performing better than average in the inappropriate diagnosis of UTI measure:** You site has decreased from 29% last report to 23% this report - this is a very positive trend! (Woohoo look at how nice that trend is since Feb 2024 (: ) Celebrate this success and maintain this momentum!
* **Met case submission requirement:** Great job submitting cases! Celebrate this success! (Sandy you rock).
* **Low/trending down ASB treatment rate:** Throughout the year, your percent of ASB cases treated with antibiotics has trended down (84% in IQIC 101, previous report was 78%, and now 73%). This is a very positive trend! Work to maintain this momentum!
* **High nitrofurantoin use:** Less harmful/more narrow therapy use is high at your site! Great job!

**Areas of Improvement**:

* **ASB treatment rate of 73% and prevalence rate of 27%:** I want to recognize that it is great that these numbers are improving, however, there is always still work to be done in these areas.For example, one in every 4 patients with a positive urine culture are still asymptomatic. Keep working on this but incredible work overall!