WHY NOT TREAT URINE LIKE BLOOD?
Urine testing is one of the three most commonly ordered diagnostic screening tests\(^1\).
TREAT URINE LIKE BLOOD.

Every patient. Every time...
because there is a life behind every sample.
Critical Issues in Urine Testing

Far-Reaching Consequences for an Important Test

- Urine testing is one of the three most commonly ordered diagnostic screening tests\(^1\)
- U.S. hospitals process hundreds of millions of urine samples annually\(^2\)
- Failure to preserve samples jeopardizes sample quality and is out of compliance with CAP Guidelines
- Poor specimen quality may lead to erroneous results that significantly impact patient results
- Leakage and spills associated with open systems pose significant financial, clinical, and safety issues
## Clinical Indications for Urine Testing

<table>
<thead>
<tr>
<th>Disease State</th>
<th>U.S. Prevalence/Incidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes&lt;sup&gt;3&lt;/sup&gt;</td>
<td>23.6 million&lt;sup&gt;4&lt;/sup&gt;</td>
</tr>
<tr>
<td>Chronic kidney disease&lt;sup&gt;5&lt;/sup&gt;</td>
<td>26 million&lt;sup&gt;6&lt;/sup&gt;</td>
</tr>
<tr>
<td>Acute pyelonephritis&lt;sup&gt;7&lt;/sup&gt;</td>
<td>100,000 hospitalizations/year&lt;sup&gt;7&lt;/sup&gt;</td>
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<tr>
<td>Uncomplicated UTI&lt;sup&gt;7,8&lt;/sup&gt;</td>
<td>8 million&lt;sup&gt;7&lt;/sup&gt;; 479,000 hospitalizations/year&lt;sup&gt;9&lt;/sup&gt;</td>
</tr>
<tr>
<td>Catheter-associated UTI&lt;sup&gt;10&lt;/sup&gt;</td>
<td>&gt;1 million/year&lt;sup&gt;11&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

TREAT URINE LIKE BLOOD.
Bacteria can double every 20 minutes when a urine specimen is unpreserved\textsuperscript{15}

45% of outpatient samples re-collected are not reimbursed\textsuperscript{16}

15% median U.S. contamination rate, mostly caused by noncompliance with established guidelines\textsuperscript{12}

2x bacteria can double every 20 minutes when a urine specimen is unpreserved\textsuperscript{15}
Specimen Contamination, Deterioration, and Overgrowth are Widespread

CLSI and WHO Urinalysis Guidelines stipulate that urine samples be:\textsuperscript{13,14} 

- Processed by the lab within 2 hours of collection and kept refrigerated
- Or, immediately preserved using a specifically designed chemical preservative

Unpreserved samples run the risk of contamination and/or overgrowth, which may lead to:

- Slower reporting of results
- Re-collection, relabeling, and retesting
- Unnecessary treatment such as antibiotics
- Financial inefficiencies
Leakage and Spills Disrupt Workflow

Leaks and Pour Off Rates are a Major Concern

- Pour offs are common practice
- Spills and leaks are widespread
- Leakage in pneumatic tubes that cause system shutdown occurs 2 to 5 times per year
- Specimens that leak are discarded, requiring re-collections

Costly Workflow Impact

Lab Impact:
- Inefficient workflow with significant time/labor costs

Financial Impact:
- Increased labor
- Cost of cleanup
Instrumentation and Automation Trends

Today’s Urinalysis and Microbiology Labs are looking for workflow improvements. Many are turning to semi- or fully automated instruments to improve their workflow.

Why implement automation but not receive an automation-ready specimen for analysis?
Limitations of Open Systems Impact Both Results and Costs

Process Errors Can Lead to Inappropriate or Unnecessary Treatment

- Up to 70% of urine cultures reflect false-positive results and yield no clinically relevant information$^{17,18}$
- Closed system users have 3x greater chance of getting accurate UTI testing results than open system users$^{16}$
- Inability to confirm UTIs leads to prolonged patient stays and unnecessary treatment for nonexistent infections$^{16}$
- Individuals using an antibiotic for UTI may develop resistance$^{19}$

The Bottom Line Impact of Testing Errors

- Treatment for false positives may not be reimbursed
- Repeated urine cultures can prolong inpatient stays by approximately two days at a typical cost of $900$^{16}$
Outcomes of Unconfirmed UTI

- 54% treated with pathogen-resistant antibiotic
- 73% had prolonged inpatient stay
- 54% of outpatients returned for visit
- 73% were treated for a nonexistent infection

TREAT URINE LIKE BLOOD.
because there is a life behind every sample.

TREAT URINE LIKE BLOOD.

Every patient. Every time...
BD Life Sciences – Preanalytical Systems understands the challenges you face surrounding specimen quality, changes in reimbursement, workflow efficiencies, instrumentation and automation.

Enhancing the patient experience is our number one concern. With over 60 years of clinical expertise, it’s our goal to help you…

- Improve sample quality
- Ensure specimen readiness for instrumentation and automation
- And, improve your overall workflow and efficiency
References

To learn more about specimen equality, please contact your local BD Sales Consultant today.

You can also contact us directly:

BD Global Technical Services at 1.800.631.0174 or submit your inquiry at www.bd.com/vacutainer/contact

BD Customer Service at 1.888.237.2762
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