

Reducing Waste Ordering at WDHB – are “URINE” or not?

An initiative to improve test requests for suspected urinary tract infections (UTI) in ED/ADU patients

The Problem

- Urine culture is often requested ‘routinely’, even when not clinically indicated.
- Estimates from General Medicine post acute ward rounds suggests that up to 30% of these requests are unnecessary. *“with compassion”*
- Waste, unnecessary patient discomfort and staff time are a consequence.

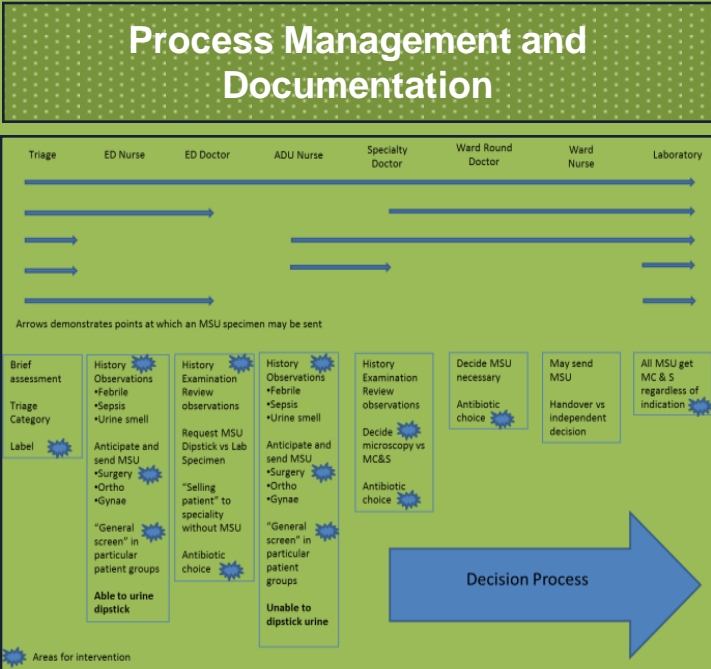
Find and Define

Improvement Project: FAST Methodology

The Goal

“better, best, brilliant”

- To improve the process of requesting and interpretation of urine cultures in accordance with best practice.
- Reduce unnecessary antibiotic usage, costs and laboratory resource utility. *“everyone matters”*
- Improving patient journey and outcome and save staff time.



Establish baseline in ED/ADU April-May 2013

Education/Awareness campaign July-August 2013

Re-audit in ED/ADU to measure impact September 2013



Cost Savings of Inappropriate Requests (projected):

56% of MSU's considered inappropriate (i.e. non infection or infection with clear source) in baseline audit
Assume 50 urines/day → ~ 28/day inappropriate
56% of MSUs = 214,620/year
If done as dipstick, then cost \$4701
APPROX SAVINGS (in ADU/ED) = **\$210,000/year**

Approximate cost of Dipstick*

Approximate cost of MSU*

MSU = 45x more expensive. (*Cost excluding nursing time etc)

Solve

Education & Awareness

Testing for suspected Urinary Tract Infection (UTI)

DID YOU KNOW?

- over 40% of urine requests received in the lab do not have any indication for testing
- a negative urine dipstick (nil leukocyte esterase & nitrites) effectively rules out UTI
- we can reduce cost and time spent by only ordering urine cultures when clinically indicated
- we can reduce unnecessary antibiotic prescribing and potential side effects by only treating when indicated

Guidelines for UTI DIPSTICK testing include:

- Dysuria/frequency
- Febrile without septic focus
- Abdominal/flank pain
- Delirium screen
- Renal colic
- Haematuria

REMEMBER....

- Is a urine culture needed? Should have clinical suspicion for UTI
- If in doubt ...DIPSTICK to check it out. If negative for UTI there is no need to send for culture
- Repeat BEFORE you treat – for contaminated specimens
- Urine samples may need to be sent for non infectious reasons (e.g. proteinuria/casts)

Increase Optimal Use of Dipstick

✓ Education Programme

✓ Use of Dipstick Machine

Analyse and Track

	Patients analysed	
	Baseline	Re-audit
Medicine	121	103
Surgery	48	39
Ortho	10	7
Total	179	149

Urine Requests /100 ED visits

Baseline period: MSU 25.3
Dipstick 11

Re-audit period: MSU 20 (IMPROVED)
Dipstick 19 (IMPROVED)

Use of dipstick

Re-audit 41%

Baseline 18%

Baseline

Overall 15% reduction in non-infection related inappropriate requests

Re-audit

For non-infection related inappropriate p=0.006 (90%CI 5.57-23.1)

Actual Net Cost Savings of Non-infection Inappropriate Requests/Year: \$52,479

■ Suspected UTI

■ Presumed infection/sepsis-unclear source

■ Non-infection related appropriate

■ Infection with clear alternate source

■ Non-infection related inappropriate

Conclusions

Dipstick usage increased by 23%
Significant reduction in non-infection related inappropriate reasons for MSU testing
Significant cost savings demonstrated

