Proposed changes to urine specimen processing and new diagnostic algorithms

Following introduction of diagnostic algorithms for UTI in primary care, there has been a large and sustained reduction in number of urine specimens being received from primary care over the last 2 years. We have now produced adapted clinical algorithms for UTI diagnosis in hospital. In collaboration with the elderly care physicians we have also developed pathways for management of confused elderly patients with possible UTI – both in hospital and in the community.

Current published local pathways on Map of Medicine include :

Primary Care	Secondary Care
UTI in females UTI in males Suspected prostatitis Chronic prostatitis Recurrent UTI UTI in catheterised patients UTI and bacteriuria in pregnancy UTI in the elderly	UTI in hospitalised patients UTI in the elderly in hospital UTI in hospitalised patients with catheters

On the back of these changes, we have reviewed the laboratory service and are able to make a number of improvements:

1. We will now culture all urines, regardless of level of pyuria. As specimens are more likely to come from patients with UTI, the positive predictive value of culture will rise, even in the absence of pyuria.
2. We will be able to give more time to reporting of mixed cultures from complex patients with possible infection (eg. confused elderly; catheter associated infection). These situations are the ones that are hard to manage and standard microbiological approaches to reporting of pure cultures does little to help clinical management.
3. We will process and report hospital urine cultures 7 days a week. This should improve patient management, and in particular may facilitate oral switches and earlier discharge.

Over the past few years there has been a substantial rise in the number of urine specimens sent for microbiological investigation from hospital locations. Evidence suggests this is probably driven by dipstick results rather than clinical need. This is costly, both in terms of laboratory processing, but also as a driver for inappropriate antibiotic prescribing.

In order to free resources for the changes to laboratory practices, we will now stop culturing urine from all locations unless there are clear clinical details on the request form. Specimens with forms that are blank, or contain dipstick information alone, will not be cultured. They will be stored for 2 working days before being discarded. The laboratory can be contacted for these to be cultured if the clinical information is then made available.

Please contact Tom Lewis (tom.lewis@nhs.net) with any comments.