

Professional Comments

Note: Below are unsolicited comments from professionals in the health sector. Names have been omitted.

Professional Comments:

- Antenatal**
- Microbiology**
- Paediatrics**
- GPs**
- Clinicians**
- Prescription**
- Uro-gynaecologists**
- Safe Motherhood Program**

Professional Comments - Antenatal:

Failure to detect UTI in ante natal has serious implications both for the parent and infants. Costs... Estimating the approximate financial cost of falsely diagnosing at UTI in an infant is difficult; the reckoning will need to include the cost of initial antibiotic treatment, initial hospitalisation in some cases, prophylactic antibiotic treatment, follow-up urine cultures, treating the false-positive follow urine cultures, the cost of an ultrasound of the renal tract, MCU, DMSA/DTPA or other radioisotope imaging, outpatient follow-up, GP follow-up, lost working days for parents, travel, etc.

Preterm labour which results in millions of pounds worth of neonatal intensive care and in a great deal of paediatric morbidity and mortality through the complications of prematurity. In addition, maternal urinary infections during pregnancy have been associated with an increased rate of cerebral palsy in their infants. {Ref: Spinillo A.

Capuzzo E. Stronati M. Ometto A. De Santolo A. Acciano S. Obstetric risk factors for periventricular leukomalacia among preterm infants. [Journal Article] *British Journal of Obstetrics & Gynaecology*. 105(8):865-71, 1998 Aug; Polivka BJ. Nickel JT.

Wilkins JR 3rd. **Urinary tract** infection during pregnancy: a risk factor for **cerebral palsy**. [Journal Article] *JOGNN - Journal of Obstetric, Gynecologic, & Neonatal Nursing*. 26(4):405-13, 1997 Jul-Aug.

Professional Comments - Microbiology:

Cost in relation to false positives

The cost of an incorrect sample is summarised in relation to false positives by a senior microbiologist

1. False-positive results will lead to unnecessary treatment for some of the patients

[20p for trimethoprim, £10 for cipro]

2. Said treatment will cause side-effects needing further treatment in a proportion of patients: piriton for the rash, fluconazole for thrush, metronidazole for C.diff]

3. If you are really unlucky, the C.diff case will escalate into a full-blown outbreak, with all the associated direct and indirect costs.

4. Then the lawyers get involved, add several zeroes...

The device looks like a sound investment already!

August 2005.

Professional Comments - Paediatrics:

The cost of not obtaining a correct diagnosis by an inadequate collection method is summarised by a paediatrician in his area of work

“There are the implications of a host of other issues – for example failure to detect

UTI in ante natal has serious implications both for the parent and infants. Costs...

Estimating the approximate financial cost of falsely diagnosing at UTI in an infant is difficult; the reckoning will need to include the cost of initial antibiotic treatment, initial hospitalisation in some cases, prophylactic antibiotic treatment, follow-up urine cultures, treating the false-positive follow urine cultures, the cost of an ultrasound of the renal tract, MCU, DMSA/DTPA or other radioisotope imaging, outpatient follow-up,

GP follow-up, lost working days for parents, travel, etc. This cost might reach a thousand pounds Sterling or more very quickly.”

Professional Comments - GP:

1 - A GP commented as follows: “To examine the cost saving of using the Cleancatch Midstream may be marginal if you consider only the financial cost of the laboratory component of the retest at its basic. But there are other quality benefits of using the Cleancatch Midstream in terms of improved clinical outcomes, patient preference, and (probably) infection control. The cost of a retest is more than the laboratory fee: If one were to do a detailed time and motion study of all the steps which are taken in relation to a result requiring a retest: receive an equivocal result, interpret it, delegate the task of contacting the patient, explaining the result, making further inquiries about symptoms, current antimicrobial treatments etc, making the patient available for retesting (which may involve the patient or staff having to take time off their usual activities, travel etc), obtaining the specimen, transporting the specimen, obtaining the result, interpreting the two results in the clinical context, and then making a clinical decision.... I think that a retest is a big deal, with substantial costs associated with it. These are not costs which are immediately apparent, but they are the costs which invisibly consume a big chunk of the NHS budget. This is precisely why we need quality initiatives to reduce repetition and error”

2 - In my practice as a GP and also as a hospice physician, I find current methods of collecting urine samples totally unsatisfactory. Most patients find it is almost impossible to provide an actual MID-STREAM sample - which is what an MSU is all about.

Delivering exactly what the physician wants - the mid-stream part of the urine sample. This is vital so as to give a valid result, which we will use to diagnose and treat the patient. Accurate results are important both for delivering best treatment for the patient and in controlling costs both on invalid tests and unnecessary prescriptions.

The number of samples collected per doctor per practice is very significant. I think (a quality MSU device) is a much needed solution to a very old and ongoing problem. I am sure that most doctors and nurses will feel the same.

Professional Comments – Clinicians:

Kass (1956 paper). A microbiologist wrote in to us as follows: “Whilst the guidelines (from BSOP41 issue 5 of 2005 just issued by HPA) acknowledge the Kass paper in the ‘Significant Bacteriuria’ section; it does say “Initial studies demonstrated that bacterial counts of $\geq 10^8$ cfu/L ($\geq 10^5$ cfu/ml) were indicative of infection and counts below this indicated contamination”, it continues that these values have since been revised. The paper by Stamm is typical of this

The guidelines suggest that the Kass threshold may be seen as too high for symptomatic women and the threshold is recommended to be 100 cfu/ml (100,000 cfu/l). The Jackson et al 2005 paper only considers asymptomatic women, the reduction in false positives associated with the Cleancatch Midstream would therefore present an increased saving not considered by Jackson

Direct comparison between the papers can be considered between the two in asymptomatic women Only in the case of asymptomatic women can a direct comparison be made between the two papers. . In the guidelines “Growth of <108 cfu/L (<105 cfu/ml) in asymptomatic, non-pregnant women are rarely persistent and usually represent contamination”, citing Eisenstadt, J (1996).

In the Jackson paper <108 cfu/L or <105 cfu/ml is listed as 10,000/ml and is considered not significant. The guidelines are more conservative, suggesting that repeats should be carried out if there is either one strain of isolate or if there is one predominant strain at a level with a total of 107 to 108 cfu/L. Again the guideline would encourage more retests than the parameters of the Jackson paper, suggesting that clinicians following the guideline may make greater total savings than those using the parameters listed by Jackson et al 2005.”

Professional Comments - Prescription:

Prescribing and Driving: Importance of learning the road signs to prevent a crash.

>> From a posting by a doctor on the IAM website:

I once tried to use an analogy between driving and antimicrobial prescribing to try to induce our clinicians to attend my 'antimicrobial prescribing for prescribers' sessions. It went something like this: all drivers think they are good, safe drivers, but I would guarantee that a one hour sessions with an Institute of Advanced Motorists observer would make them better, safer drivers. Like driving, antimicrobial prescribing kills people both directly (bouncing them off the bonnet cf. wrong antibiotic, wrong dose, side effects etc) and indirectly (pollution cf. producing multiresistant organisms and enabling them to flourish). The hope was that, just as everyone would benefit if all drivers trained with the IAM, so everyone would benefit if all prescribers knew a bit more about antibiotics.

No, it didn't work, and attendance at my sessions has remained woeful. Also, no-one has yet asked for details of their local IAM group (but happy to supply this if anyone is interested - or go to www.iam.org.uk). Actually to train and do your advanced driving test costs virtually nothing and pays for itself many times over (reduced car insurance, because insurers know you are 60% less likely to be involved in an accident; more sympathetic driving, reducing mechanical wear and tear on your car; and better fuel consumption - what would an extra 5 mpg save you per year?)

Professional Comments - Uro-gynaecologists:

Urine collection is central to my work in uro-gynaecology. The existing methods of urine collection cause my patients embarrassment and distress -often with hands, clothing and feet contaminated with their own and others' urine. This contamination, and the consequent distress and hazards, are passed down the human chain that the urine sample takes through the process of analysis. [A quality MSU device] instantly solves this problem and will be welcomed with open arms by anyone having to provide! or process a urine sample. In one step it stops the mess and risk of urine collection, and restores dignity to an undignified procedure.

Professional Comments - Safe Motherhood Program:

The current methods of collection of mid stream urine specimens show a vast difference in comfort, spillage rates, and quality of results between men and women. It is well known that there are no effective barrier protections for women for the spillage of urine when giving a sample. Urine may contain infections such as Chlamydia, Gonorrhoea, Hepatitis B and C, HIV and MRSA, and UTI. The Whiz Midstream Cleancatch can change all this and has enormous potential as a device to help the fight against infections and their spread. This simple device is making a major contribution to improved patient care and the health and safety of medical staff and the public.