

NHS Tayside

Optimisation of the use of urinary culture in asymptomatic patients to ensure that it was not used where results were unlikely to alter clinical management.

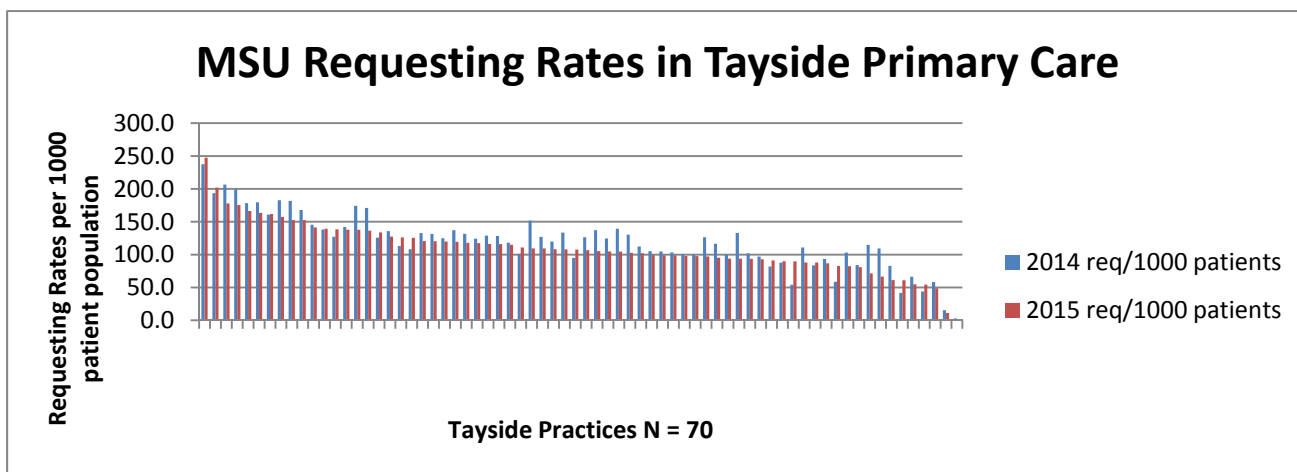


The introduction of a laboratory testing algorithm by NHS Tayside was undertaken to deliver demand optimisation in the diagnosis of urinary tract infection. Using their unique laboratory requesting interface, clinicians were required to confirm that the patient was symptomatic for infection (eg abdominal pain, fever, burning on urination, need to pass urine frequently, offensive smell or colour to urine or acute confusion) at the time of the test request. Where patient was asymptomatic they were required to confirm whether there was an another appropriate indication for the test to take place.

Examples being pregnancy, acute confusion, sepsis, post renal transplantation or the need to screen for organisms showing antibiotic resistance.

The system was also configured to provide evidence of best practice in the diagnosis of urinary tract infection. The basis for this process of demand optimisation was evidence that many asymptomatic patients were having samples submitted for culture at the time of routine urinalysis (e.g. diabetic review or hypertension check). Clinicians had assumed that where there was evidence of protein, leucocytes, blood or nitrites that the sample should be submitted for culture and that in many cases patients were prescribed antibiotics that were not indicated and had potential to cause side effects or result in bacterial resistance.

The effectiveness of this intervention was measured and the graph below shows evidence of a change in clinical practice in the requesting of urine cultures and a reduction in variability by individual practice. The algorithm is in place across NHS Tayside and where outliers are identified it is planned that support will be provided to discuss reasons for this variation with the practice. It will only work if the algorithm can be implemented on the Board's laboratory test requesting system (Tayside use ICE).



Headlines

- 51 (73%) practices showed an overall fall in the rate of requesting, though 2 surgeries showed no discernible change
- 28 (40%) of 70 practices showed a greater than 10% reduction in requesting rates
- 17 (24%) of 70 practices showed an increase in rate of testing
- Biggest fall in requesting was 39.3% in one surgery
- Biggest rise in requesting was 46.1% in one surgery
- 2014 median fell from 124 to 107 per 1000 practice patients overall

The efficiency gains through the implementation of guided decision making for the clinical service user: 16865 MSU investigations avoided, £3,373 costs avoided.

The limitations of such change is the requirement that IT system in place locally has to be configured in a manner to allow decision aided requesting and at the present time this is not universally available across Scotland with variation by Boards in the systems used to support laboratory services.