BURNLEY LOCALITY URINARY TRACT INFECTION PROTOCOL

Background:

The treatment of Urinary tract infection (UTI) is the second most common clinical indication for empirical antimicrobial treatment in primary and secondary care, and urine samples constitute the largest single category of specimens examined in most medical microbiology laboratories. Healthcare practitioners regularly have to make decisions about prescription of antibiotics for urinary tract infection from very little information on symptoms and presentation.

The diagnosis of UTI is particularly difficult in elderly patients, who are more likely to have asymptomatic bacteriuria as they get older. Elderly patients in nursing and residential care frequently receive unnecessary antibiotic treatment for asymptomatic bacteriuria despite clear evidence of adverse effects with no compensating clinical benefit. For patients with symptoms of urinary tract infection and bacteriuria the main aim of treatment is relief of symptoms. Secondary outcomes are adverse effects of treatment or recurrence of symptoms. For asymptomatic patients the main outcome from treatment is prevention of future symptomatic episodes. Unnecessary use of tests and antibiotic treatment may be minimised by developing simple decision rules, diagnostic guidelines or other educational interventions.

Reduced antibiotic prescribing is a key component of the UK's action plans for reducing antimicrobial resistance. Unnecessary antibiotic treatment of asymptomatic bacteriuria is associated with significantly increased risk of clinical adverse events including Clostridium difficile infection (CDI) or methicillin resistant Staphylococcus aureus (MRSA) infection, and the development of antibiotic-resistant UTIs.

Aim:

- Identify signs and symptoms of possible UTI or other related conditions
- Reduce inappropriate antibiotic prescribing
- Reduce inappropriate clinical interventions
- Reduce inappropriate hospital admissions
- Improved quality care to elderly patients
- Practices, carers and other health professionals using a collaborative approach to health care provision.
- Evidence based healthcare provision and quality outcomes measures.

Practice based Protocol:

All patient's, including those residing in nursing and residential care will be asked to submit the following information relating to presentation of symptoms;

Suspected Urinary Tract Infection

Please tick below all the symptoms that apply to you:

Pain on passing urine ☐

Passing urine more frequently ☐

Urine looks cloudy ☐

Urine smells offensive ☐

Only presentations of 3 or more of the above symptoms will be treated empirically without further testing. At the point of treatment, carers will be asked to commence reporting on the fluid and urinary frequency of the patient for a period of two weeks.

Nursing/residential home protocol:

Patients with a considered uti, will be observed on their fluid and urinary frequency using simple to-use- tools. This recorded data will be used by the clinicians in the future decision making on the patient's ongoing treatment pathway.

Tools:

GULP_Dehydration_
Risk_Screening_Tool_

Continence_Assessm
ent_Fluid_Output_Ch

New_self_reported_f
luid_intake.docx

Copy_of_Food_First
_Resource_Pack_201

Evidence:

This is based on the following evidence detailed below (extracted from the CKS website).

A set of health technology assessment studies of diagnostic algorithms in UTI concluded that UTI cannot be confidently confirmed or excluded on the basis of

clinical features alone [Little et al, 2009]. The studies found that four symptoms independently predicted UTI:

- Urine is cloudy on examination: odds ratio (OR) 2.32 (95% CI 1.40 to 3.85, p = 0.001).

- Urine smells offensive: OR 2.02 (95% CI 1.05 to 3.90, p = 0.034).

- Dysuria is moderately severe: OR 2.76 (95% CI 1.78 to 4.28, p < 0.001).

- Nocturia is moderately severe: OR 1.81 (95% CI 1.16 to 2.80, p = 0.008).

- Because individual symptoms are inaccurate predictors, clinical prediction rules using these four symptoms to diagnose UTI were developed and assessed [Little et al, 2009].

  - The 'two or more of four symptoms' rule had a positive predictive value of 77% and negative predictive value of 54%.

  - The 'three or four of four symptoms' rule had a positive predictive value of 84%.

  - And, the 'none of four symptoms' rule had a negative predictive value of 71%.

REFERENCE:

Little, P., Turner, S., Rumsby, K. et al. (2009) Dipsticks and diagnostic algorithms in urinary tract infection: development and validation, randomised trial, economic analysis, observational cohort and qualitative study. *Health Technology Assessment* 13(19).