

NATIONAL INSTITUTE FOR CLINICAL EXCELLENCE

SCOPE**1 Guideline title**

Urinary tract infection: investigation and long-term management of children up to 8 years

1.1 Short title

Urinary tract infection in children

2 Background

- a) The National Institute for Clinical Excellence ('NICE' or 'the Institute') has commissioned the National Collaborating Centre for Women's and Children's Health to develop a clinical guideline on urinary tract infection in children aged up to 8 years for use in the NHS in England and Wales. This follows referral of the topic by the Department of Health and Welsh Assembly Government (see Appendix). The guideline will provide recommendations for good practice that are based on the best available evidence of clinical and cost effectiveness.
- b) The Institute's clinical guidelines will support the implementation of National Service Frameworks (NSFs) in those aspects of care where a Framework has been published. The statements in each NSF reflect the evidence that was used at the time the Framework was prepared. The clinical guidelines and technology appraisals published by the Institute after an NSF has been issued will have the effect of updating the Framework.
- c) NICE clinical guidelines support the role of healthcare professionals in providing care in partnership with patients, taking account of their individual needs and preferences, and ensuring that patients (and their carers and families, where appropriate) can make informed decisions about their care and treatment.

3 Clinical need for the guideline

- a) In the past 30–50 years the natural history of urinary tract infection (UTI) in children has changed, as a result of the introduction of antibiotics and improvements in healthcare. This change has contributed to uncertainty about the most appropriate and effective way to diagnose, treat and investigate UTI in children.
- b) UTI is one of the commonest bacterial infections causing illness in infants and children and accounts for 5% of febrile illness in children under 2 years. The rate of UTI in newborn infant boys is higher than the rate in girls of the same age, but by 6 months the incidence in girls is greater. At all other ages in childhood UTIs are more common in girls.
- c) It is estimated that about 4% of children under 8 years develop UTIs at some point. For the population in England and Wales this translates into 24,000 children developing their first UTI each year and in addition a significant number of children, particularly girls, having recurrent UTIs requiring additional advice and assessment.
- d) It may be difficult to recognise UTI in children because the presenting symptoms are non-specific. Urine collection is also difficult in infants and toddlers. It is therefore often not possible to confirm the diagnosis.
- e) The purpose of diagnosis and treatment of UTI is first to alleviate the acute symptoms, and in the long term to protect renal tissue from the avoidable scarring that can occur if treatment is delayed. Acquired renal scarring may lead to hypertension, chronic kidney disease, complicated pregnancies, and in more severe cases, to kidney failure.
- f) Current management – involving imaging, prophylaxis and prolonged follow up – has placed a heavy burden on NHS primary and secondary care resources and a stigma of illness on children with minor health problems. It is therefore important to evaluate these practices. The aim of this guideline is to lead to more consistent clinical practice, by

considering the effectiveness of investigations and therefore accurate diagnosis, appropriate treatment and surgical intervention.

4 The guideline

- a) The guideline development process is described in detail in two publications which are available from the NICE website (see 'Further information'). *The Guideline Development Process – An Overview for Stakeholders, the Public and the NHS* describes how organisations can become involved in the development of a guideline. *Guideline Development Methods – Information for National Collaborating Centres and Guideline Developers* provides advice on the technical aspects of guideline development.
- b) This document is the scope. It defines exactly what this guideline will (and will not) examine, and what the guideline developers will consider. The scope is based on the referral from the Department of Health and Welsh Assembly Government (see Appendix).
- c) The areas that will be addressed by the guideline are described in the following sections.

4.1 Population

4.1.1 Groups that will be covered

- a) Otherwise healthy male and female infants and children from birth to 8 years of age with first or recurrent upper or lower tract UTI who do not have significant underlying uropathy or concomitant major illness.
- b) Within this population no additional patient subgroups have been identified at this stage but they will be given special consideration where supported by the evidence.

4.1.2 Groups that will not be covered

- a) Children with catheters in situ.

- b) Children with neurogenic bladders.
- c) Children already known to have significant uropathies.
- d) Children with underlying renal disease (for example nephrotic syndrome).
- e) Immuno-suppressed children.
- f) Infants in neonatal intensive care units.
- g) Children with serious long term conditions.

4.2 *Healthcare setting*

- a) The guideline will cover children in primary and secondary care and indications for referral to specialist tertiary care.

4.3 *Clinical management*

- a) When to consider the diagnosis of UTI in sick infants and children who were previously healthy.
- b) When and how to collect urine for the diagnosis of UTI in infants and children.
- c) Which tests establish or exclude UTI as the cause of illness in infants and children (for example, whether dipsticks are helpful, what diagnostic criteria to use in laboratories).
- d) How to treat symptomatic infants and children, including:
 - when to admit to hospital
 - when to start treatment
 - which antibiotic to use
 - what route of administration to use
 - how long to treat.

- e) How and when to treat re-infection after initial treatment.
- f) When to use prophylactic antibiotics, which antibiotics to use and when to stop them.
- g) When to use investigations and assess the structure of the urinary tract.
- h) When to refer to secondary and tertiary care.
- i) When to offer surgical intervention.
- j) When to do long term follow up.
- k) What advice to give carers and patients, including what to do if another UTI occurs.

4.4 Status

4.4.1 Scope

This is the consultation draft of the scope.

The guideline will link to the Feverish illness in children guideline, which is in development.

4.4.2 Guideline

The development of the guideline recommendations will begin in May 2005.

5 Further information

Information on the guideline development process is provided in:

- *The Guideline Development Process – An Overview for Stakeholders, the Public and the NHS*
- *Guideline Development Methods – Information for National Collaborating Centres and Guideline Developers*

These booklets are available as PDF files from the NICE website (www.nice.org.uk). Information on the progress of the guideline will also be available from the website.

Appendix – Referral from the Department of Health and Welsh Assembly Government

The Department of Health and Welsh Assembly Government asked the Institute:

To develop a guideline:

- for the investigation by imaging of the urinary tract; and
- long term management of children aged up to 8 years who have had a urinary tract infection diagnosed.

The guideline should be applicable to:

- primary care for referral; and
- for general paediatrics, paediatric nephrology and paediatric urology specialist services.

The guideline would clarify which children, following diagnosis and treatment of an acute urinary tract infection, should be referred for specialist investigation and or management and include indications for imaging of the urinary tract and for long term care including monitoring and use of prophylactic antibiotics.