DUTY: Diagnosis of Urinary Tract Infections in Young Children Study

DATE	Site ID	Patient ID
☐☐ / ☐☐ / ☐☐☐☐	☐☐	☐ – ☐☐☐☐

SECTION 1: SCREENING FORM

(Research Nurse/CSO to complete)

Inclusion Criteria

Please exclude if the answer is **'NO'** to any of the following:

Aged before their fifth birthday?	☐ Yes ☐ No
Acute illness ≤28 days?	☐ Yes ☐ No
First time in DUTY study?	☐ Yes ☐ No
Ability of parent/carer to understand & give informed consent?	☐ Yes ☐ No
Does the child have any urinary tract or constitutional symptoms (generally unwell)? See questions below (* see also examples):	
Answer Yes to at least one of the screening questions to be eligible:	☐ Yes ☐ No
○ Has the child been generally unwell (e.g. fever/feeling hot, generally not right, tired, irritable, crying more than usual, recently 'failing to thrive')?	☐ Yes ☐ No
○ Has the child had abdominal/loin pain or colic or vomiting or not eating/feeding as normal?	☐ Yes ☐ No
○ Has the child 'not been themselves' (e.g. clingy; not interested in what's going on; not playing well; low energy/tired; sleeping more or less than usual; irritable or not settling; crying more than usual)?	☐ Yes ☐ No
○ Has the child had any changes relating to passing urine (e.g. pain, changes in frequency, changes in continence, changes in urine smell or appearance or blood noticed)	☐ Yes ☐ No

Exclusion Criteria

Please exclude if the answer is '**YES**' to any of the following:

Recently (≤28 days) or currently in any research study	☐ Yes ☐ No
Presenting with trauma/injury as the predominant concern	☐ Yes ☐ No
Has taken oral or IV/IM antibiotics in the past 7 days*	☐ Yes ☐ No
Currently taking systemic (oral/IV or IM) steroids for ≥ 2 weeks *(e.g. prednisolone or dexamethasone inhaled steroids are acceptable)*	☐ Yes ☐ No
Currently or recently (≤28 days) on chemotherapy or other immunosuppression *(e.g.anti-rejection medications following renal transplant)*	☐ Yes ☐ No
Current use of urinary catheter (including intermittent use within past month)	☐ Yes ☐ No
Previous bladder surgery	☐ Yes ☐ No
Spina bifida or neurogenic bladder	☐ Yes ☐ No
Due to laboratory transport pick up times, urine sample would not have reached lab in the next 24 hours (e.g. Friday afternoon in GP surgeries).	☐ Yes ☐ No

* Use of topical antibiotics does not exclude participation

Inclusion Criteria Examples for RNs/CSOs/clinicians*

e.g. 1) well child with a sticky eye/ear but no other symptoms – exclude
e.g. 2) child with sticky eye/ear who is crying more than usual – include
e.g. 3) child with cough but no other symptoms – exclude
e.g. 4) child with cough and fever, or cough and difficulty breathing – include
e.g. 5) child with cough, no fever, but not feeding well – include
e.g. 6) child with diarrhoea, no fever, no abdominal pain, eating normally – exclude
e.g. 7) child with diarrhoea and fever/abdominal pain/reduced appetite – include

If the child satisfies all inclusion and exclusion criteria please continue to the next section

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SECTION 2: PARTICIPANT REGISTRATION FORM

(Research Nurse/CSO to ask parent/carer)

CRF Details

Date (DD / MM / YYYY)

Time (24 hr clock) :

RN/CSO Study ID

Consent obtained ☐ Yes ☐ No

Recruited at own GP surgery? ☐ Yes ☐ No

If No, please enter name of GP/surgery & address

Child's Details

First Name

Surname

Date of Birth (DD / MM / YYYY)

Gender

☐ Female ☐ Male

NHS Number

Carer's Details

First Name

Surname

Relationship to child

☐ Mother ☐ Father ☐ Other

please specify:

Address

Postcode

Contact Telephone Number

Mobile Number

Contact Notes

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Ethnicity

Please describe your child's ethnic group?

White	☐ British	☐ Irish	☐ Any other White background
Mixed	☐ White & Black Caribbean ☐ White & Black African	☐ White & Asian	☐ Any other Mixed background
Asian or Asian British	☐ Indian ☐ Pakistani	☐ Bangladeshi	☐ Any other Asian background
Black or Black British	☐ African	☐ Caribbean	☐ Any other Black background
Chinese or Other Ethnic Group	☐ Chinese	☐ Any other	
Prefer not to answer	☐ *please tick here*		

Additional Social Economic Questions:

What is your highest level of qualification? (*Please cross one box only*)

☐ Degree (or equivalent) ☐ Diploma (or equivalent)

☐ 'A' level ☐ GCSE / 'O' level

☐ None ☐ Not given

☐ Other, please specify:

Thinking about the cost of living and how it affects your household which of the following would best describe your situation?

☐ find it a strain to get by from week to week ☐ able to manage without much difficulty

☐ have to be careful about money ☐ quite comfortably off

☐ Not given

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SECTION 3: CASE REPORT FORM

(Research Nurse/CSO to ask parent/carer)

Current Symptoms

How many days (including today) has your child been unwell?	Enter number (1- 28) ☐☐
Compared to yesterday is your child same, better or worse?	☐ Same ☐ Better ☐ Worse

Please rate your overall impression of your child's current illness when at its worst from 0-10

0	1	2	3	4	5	6	7	8	9	10
Completely Well										Extremely Unwell

For each symptom, score symptom when it was at its **worst during this illness**.

Symptom	**Severity**				
	No Problem	*Slight Problem*	*Moderate problem*	*Severe problem*	*Don't Know/ NA*
Child 'not themselves' (e.g.: clingy; not interested in what's going on; not playing well; low energy/tired; irritable or not settling; crying more than usual).	☐	☐	☐	☐	
Confused or Disorientated	☐	☐	☐	☐	
Disturbed sleep	☐	☐	☐	☐	
Fever at any time during this illness (fever is feeling hot or cold)	☐	☐	☐	☐	
Fever now or in the past 24 hours	☐	☐	☐	☐	
Chills or Shivering	☐	☐	☐	☐	
New generalised rash with this illness (not worsening of existing skin conditions)	☐	☐	☐	☐	
Nappy rash or similar	☐	☐	☐	☐	
Muscle aches or pains all over	☐	☐	☐	☐	☐
Headaches	☐	☐	☐	☐	☐
Refused feeds/eating less than normal	☐	☐	☐	☐	
Poor weight gain or weight loss (in the last month)	☐	☐	☐	☐	☐
Vomiting	☐	☐	☐	☐	
Diarrhoea (at any time)	☐	☐	☐	☐	
Diarrhoea (in the past 24hrs)	☐	☐	☐	☐	
Constipation in the last week	☐	☐	☐	☐	
Abdominal pain/tummy ache/pulling up legs	☐	☐	☐	☐	

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Symptom	Severity				
	No Problem	*Slight Problem*	*Moderate problem*	*Severe problem*	*Don't Know/ NA*
Passing urine more often	☐	☐	☐	☐	☐
Any changes in urine appearance (darker, cloudy, smelly or blood)	☐	☐	☐	☐	☐
If **YES**, *please state*:	☐ Darker	☐ Cloudy	☐ Smelly	☐ Bloody	☐ Other
If **Other**, *please describe:*					
Pain/crying when passing urine	☐	☐	☐	☐	☐
Day or bed wetting when previously dry *	☐	☐	☐	☐	☐
Blocked or runny nose	☐	☐	☐	☐	
Cough	☐	☐	☐	☐	
Wheeze	☐	☐	☐	☐	
Short of breath, difficulty breathing or grunting	☐	☐	☐	☐	
Chest pains	☐	☐	☐	☐	☐
Earache or holding ear/s	☐	☐	☐	☐	☐
Sore throat	☐	☐	☐	☐	☐
More unwell compared to similar previous illnesses	☐	☐	☐	☐	
Any other symptoms	☐	Yes	☐	No	
If **YES**, *please state:*					

* *Not applicable for children wearing nappies day & night*

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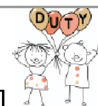

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Past Medical & Family History

These questions relate to other medical problems your child has or has had in the past. There are also some questions concerning the pregnancy, birth and early life of the child.

Not counting today, approximately how many times has your child previously consulted a doctor or nurse for this episode of illness?

☐**0** ☐**1** ☐**2** ☐**3** ☐**4** ☐**5** ☐**6** ☐**7** ☐**8** ☐**9** ☐**10** ☐**10+**

Does your child have any on-going health problems? ☐ Yes ☐ No

If **YES**, *please indicate*:

☐ asthma ☐ diabetes ☐ heart disease ☐ high blood pressure ☐ learning disabilities

☐ other *please specify*: ☐

Was the pregnancy full term for your child? ☐ Yes ☐ No

If **NO**, *please indicate*: ☐ Born Late ☐ Born Early If Early, estimate weeks: ☐☐

Was your child breastfed? ☐ Yes ☐ No

If **YES**, for how long exclusively? ☐ < 3months ☐ ≥ 3months

Were you ever told that your child's kidney, bladder or urinary system was abnormal in any way after a pregnancy ultrasound scan? ☐ Yes ☐ No

If **YES**, *please give details*: ☐

In boys ONLY – has your child been circumcised? ☐ Yes ☐ No

The next set of questions relate to your child and to close family members of your child (this includes mother, father and any brothers or sisters who are blood relatives of the child).
We are asking these questions to see whether urine infections run in families.

Has your child or member of your family ever been diagnosed with vesico-ureteric or 'kidney' reflux? ☐ Yes ☐ No ☐ Don't Know

If **YES**, *please indicate*: ☐ Child ☐ Mother ☐ Father ☐ Sibling

Has your child or any member of your family ever been diagnosed or treated for urine infections? ☐ Yes ☐ No ☐ Don't Know

If **YES**, *please indicate*: ☐ Child ☐ Mother ☐ Father ☐ Sibling

Does your child or any member of your family have any other renal/urinary problem? ☐ Yes ☐ No ☐ Don't Know

If **YES**, *please indicate*: ☐ Child ☐ Mother ☐ Father ☐ Sibling

If **YES**, *please give details*: ☐

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Medications

Is your child currently taking any medication? ☐ Yes ☐ No

If **YES**, *please indicate:*

☐ laxatives (e.g. lactulose, senna, modecol)
☐ steroid inhaler (e.g. clenil)
☐ $beta_2$ agonist inhaler (e.g. salbutamol)
☐ antihistamine (e.g. piriton)
☐ paracetamol
☐ ibuprofen
☐ other medication (please provide details):

Toileting behaviour

Does your child use nappies/pull-ups?		☐ Yes	☐ No
If **YES**, *please indicate*:	☐ Day	☐ Night	☐ Both
Approximately how many nappies/pull-ups has your child used in the last 24 hours?		*Estimate number*	☐☐
How many times do you usually bath or shower your child in a normal week?		*Estimate number*	☐☐

Examination

To be completed by Research Nurse/CSO or responsible clinician

				Please tick here if child refuses to be examined
Temperature	☐☐.☐ °C	(range 35.0 – 42.0)		☐
DUTY standard 'Thermoscan' thermometer used to check temp?			☐ Yes ☐ No	
If **NO,** *please indicate*:	☐ infrared ear	☐ digital auxiliary	☐ other:	
O_2 saturation	☐☐☐ %	(range 80 – 100%)		☐
Pulse rate	☐☐☐	(range 80 – 250 bpm)		☐
Respiratory rate	☐☐	(range 20 – 80 rpm)		☐
Capillary refill time*	☐ < 2 sec	☐ 2-5 sec	☐ > 5 sec	☐

** The Advanced Paediatric Life Support manual[1] recommends that this should be done by pressing on the sternum for 5 seconds and then recording the time it takes for the skin colour to change from white back to pink.*

Has the child's responsible clinician been informed of these results? ☐ Yes *NB: this must be done for all children*

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SECTION 4: CASE REPORT FORM

(GP/responsible clinician to complete)

Clinician's Details

Clinician Name

Clinician Profession ☐ Doctor ☐ Nurse

Clinical Examination

Please give your global impression of the child in a scale of 0-10

0	1	2	3	4	5	6	7	8	9	10

Completely Well ... Extremely Unwell

In order to for all clinicians, irrespective of profession (nurse vs. doctor) or their location (GP practice vs. Walk in Centre vs. Emergency Department) to complete the global impression scale in a similar fashion, the following guidance has been derived:

A zero score is appropriate for a child who is displaying no 'constitutional' upset. Child is fully conscious and alert, aware/interacting with their surroundings (e.g. smiling at parent/ guardian), feeding/ eating normally with normal tone, normal peripheral circulation. No fever, pain/ discomfort, tachypnoea or respiratory distress at the time of assessment.

A score of 5 is appropriate for a child who is displaying 'constitutional' symptoms / signs warranting secondary care assessment but may not require admission. The primary care clinician would feel a secondary care assessment / period of observation was necessary. Emergency Department clinician would not feel happy to discharge without laboratory / radiographic tests or a period of observation.

A score of 10 is appropriate for a child who is displaying life-threatening signs requiring immediate resuscitation such as unconsciousness and / or circulatory collapse.

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Please examine all of the following in all children.
For each question, please indicate: 'normal' or 'abnormal'. If abnormal, tick all that apply.

Examination	Observations			
Hydration	☐ Normal	☐ Some dehydration	☐ Severe dehydration	☐ *Not examined*
Conscious Level	☐ Normal	☐ Drowsy	☐ Irritable	☐ *Not examined*
General	☐ Normal	☐ Abnormal		☐ *Not examined*

If abnormal please tick all that apply:

☐ Pallor ☐ Flushed ☐ Jaundice ☐ Distressed ☐ Lymphadenopathy

☐ Other (please specify): ________

Throat ☐ Normal ☐ Abnormal ☐ *Not examined*

If abnormal please tick all that apply:

☐ Red or Inflamed ☐ Swollen ☐ Quinsy ☐ Discharge or Pus

☐ Other (please specify): ________

Ears ☐ Normal ☐ Abnormal ☐ *Not examined*

If abnormal please tick all that apply:

☐ Pink ☐ Red or Bulging ☐ Fluid Level

☐ Acute Perforation ☐ Chronic Perforation

☐ Other (please specify): ________

Chest ☐ Normal ☐ Abnormal ☐ *Not examined*

If abnormal please tick all that apply:

☐ Bronchial Breathing ☐ Unilateral ☐ Bilateral

☐ Wheeze ☐ Unilateral ☐ Bilateral

☐ Crackles ☐ Unilateral ☐ Bilateral

☐ Recession ☐ Grunting ☐ Nasal Flaring
(*any intercostal/subcostal/ supra-clavicular*)

☐ Other - *please specify*: ________

Abdomen ☐ Normal ☐ Abnormal ☐ *Not examined*

If abnormal please tick all that apply:

☐ Mass or Organomegaly present If **Yes**, *please state*:

☐ Loin Tenderness ☐ Suprapubic Tenderness

☐ Other - *please specify*: ________

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Diagnosis and Planned Management Prior to Urine Dipstick Results

We would prefer if you answer these questions prior to seeing the urine dipstick results:

Are you currently aware of the urine dipstick results? ☐ Yes ☐ No

What is your working diagnosis?

☐ URTI ☐ chest infection ☐ bronchitis ☐ bronchiolitis ☐ pneumonia

☐ exacerbation of asthma (infective or non-infective) ☐ tonsillitis ☐ otitis media ☐ pharyngitis

☐ UTI ☐ gastroenteritis ☐viral illness

☐ other *please state:*

How certain are you of this diagnosis at this point?

☐ uncertain ☐ fairly certain ☐ certain ☐ very certain

Before seeing dipstick results, are you planning on treating this child with antibiotics?

☐ No ☐ Yes [for suspected UTI] ☐ Yes [for other reason]

If Yes: ☐ immediate script ☐ delayed script

Before seeing dipstick results, would you have referred this child to a paediatrician or admitted this child to hospital?

☐ No ☐ Yes [for suspected UTI] ☐ Yes [for other reason]

☐ N/A [recruited in ED]

If this child was **NOT** in the DUTY study would you have requested a urine sample?

☐Yes ☐ No

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Actual Management

PLEASE COMPLETE THE NEXT QUESTIONS AFTER REVIEWING DIPSTICK RESULTS

Clinician Name

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

Clinician Profession ☐ Doctor ☐ Nurse

Has your working diagnosis changed? ☐ Yes ☐ No

If Yes, *please indicate:*

☐ URTI ☐ chest infection ☐ bronchitis ☐ bronchiolitis ☐ pneumonia

☐ exacerbation of asthma (infective or non-infective) ☐ tonsillitis ☐ otitis media ☐ pharyngitis

☐ UTI ☐ gastroenteritis ☐viral illness

☐ other, *please state:* ______

How certain are you of your diagnosis?

☐ uncertain ☐ fairly certain ☐ certain ☐ very certain

Did you treat the child with antibiotics?

☐ No ☐ Yes [for suspected UTI] ☐ Yes [for other reason]

If Yes: ☐ immediate script ☐ delayed script

Please provide details of script: ______

[GP surgery only]
Was the child referred for same day urgent assessment in hospital?

☐ No ☐ Yes [for suspected UTI] ☐ Yes [for other reason] ☐NA

[ED only]
Was the child admitted to hospital for this illness?

☐ No ☐ Yes [for suspected UTI] ☐ Yes [for other reason] ☐NA

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SECTION 5: CASE REPORT FORM

(Research Nurse/CSO to complete)

Urine Collection

Was a urine sample provided before the child left the surgery /discharged from ED? ☐Yes ☐ No *
(* *If 'No': ensure instructions are given to parent)*

Which method was used to collect urine?

☐ Clean Catch ☐ Nappy Pad ☐ Bag ☐ Catheter ☐ Suprapubic aspiration

Date child provided (passed) urine ☐☐ / ☐☐ / ☐☐☐☐
D D M M Y Y Y Y

Time child provided (passed) urine ☐☐ : ☐☐ (24 hr clock)

If urine sample not provided, please given reason:

☐

Dipstick Results

Please record dipstick information:

Urine Dipstick Tested: ☐ Yes ☐ No

Date urine tested: ☐☐ / ☐☐ / ☐☐☐☐
D D M M Y Y Y Y

Time urine tested: (24 hr clock) ☐☐ : ☐☐

Read Time (30 secs → 2 mins)								
2 mins	**Leukocytes**	☐ Negative	☐ Trace	☐ +	☐ ++	☐ +++		
	Nitrites	☐ Negative	☐ Positive	☐ +	☐ ++	☐ +++		
	Protein	☐ Negative	☐ Trace	☐ +	☐ ++	☐ +++	☐ ++++	
	pH	☐ 5.0	☐ 6.0	☐ 6.5	☐ 7.0	☐ 7.5	☐ 8.0	☐ 8.5
	Blood	☐ Negative	☐ Non-haem Trace	☐ Non-haem ++	☐ Haem Trace	☐ Haem +	☐ Haem ++	☐ Haem +++
	Specific Gravity	☐ 1.000	☐ 1.005	☐ 1.010	☐ 1.015	☐ 1.020	☐ 1.025	☐ 1.030
	Ketones	☐ Negative	☐ Trace	☐ +	☐ ++	☐ +++	☐ ++++	
30 secs	**Glucose**	☐ Negative	☐ Trace	☐ +	☐ ++	☐ +++	☐ ++++	

(SIEMENS – Multistix 8 SG)

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Sample Processing

Has the clinician taking responsibility for this child's care been informed of the dipstick results?	☐ Yes *NB this must be done for all children*
Has the urine sample been divided, labelled with DUTY stickers and sent to the usual local NHS laboratory AND the central DUTY laboratory?	☐ Yes: sent to NHS lab only. ☐ Yes: sent to both labs. ☐ No: dipstick test only.

*NHS sample takes priority over the research lab sample if there is less than 2ml of urine.

Has the participant been given a £5 voucher?	☐ Yes ☐ No
Please record Voucher serial number here:	