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Quality standards

Consultation summary report: Urinary tract infections in adults (update)

Quality Standards Advisory Committee post-consultation meeting: 15th November 2022

1. Introduction

The draft quality standard for urinary tract infections in adults (update) was made available on the NICE website for a 5-week public consultation period between 06 September and 11 October 2022. Registered stakeholders were notified by email and invited to submit consultation comments on the draft quality standard. General feedback on the quality standard and comments on individual quality statements were accepted.

Comments were received from 16 organisations, which included service providers, national organisations, professional bodies and others.

This report provides the quality standards advisory committee with a high-level summary of the consultation comments, prepared by the NICE quality standards team. It provides a basis for discussion by the committee as part of the final meeting where the committee will consider consultation comments. Where appropriate the quality standard will be refined with input from the committee.

Consultation comments that may result in changes to the quality standard have been highlighted within this report. Comments suggesting changes that are outside of the process have not been included in this summary. The types of comments typically not included are those relating to source guidance recommendations and suggestions for non-accredited source guidance, requests to broaden statements out of scope, requests to include thresholds, targets, large volumes of supporting information, general comments on the role and purpose of quality standards and requests to change NICE templates. However, the committee should read this summary alongside the full set of consultation comments, which are provided in appendix 1.

1. Questions for consultation

Stakeholders were invited to respond to 6 questions at consultation. These questions are listed in full in sections 3 and 4 of this report.

1. General comments

The following is a summary of general (non-statement-specific) comments on the quality standard.

* Support for the quality standard:
  + Statements provide an appropriate framework for delivery of services for the treatment of urinary tract infection (UTI) in adults.
  + Rationale for diagnosis and management (for limited use of antibiotics unless symptomatic and the duration of treatment) is in line with the latest guidance that NHS England is working to in primary care.
  + Would help to reduce the over-use of antibiotics and any associated complications with antimicrobial resistance and clostridium difficile.
  + Major topics are covered.
* Concerns about the quality standard:
  + It uses the SIGN 160 guideline which has not been adopted for use in England, and does not align with current practice in England which uses UKHSA / PHE’s [Urinary tract infection: diagnostic tools for primary care](https://www.gov.uk/government/publications/urinary-tract-infection-diagnosis).
  + It does not align with other NICE guidance on UTIs which references the UKHSA / PHE diagnostic tool.
  + There is an equality impact as male UTI is not emphasised.
  + It should take account of the British Menopause Society consensus statement on urogenital atrophy (a condition due to oestrogen deficiency) in perimenopausal women and postmenopausal women.
* Suggested changes:
  + Definitions of different types of UTIs is needed at the start of the document to distinguish from other infections of the urinary tract, e.g. febrile patients, pyelonephritis, urological abnormalities etc.
  + Midstream urine collection should be highlighted wherever ‘urine specimen’ is mentioned.
  + No advice given on how to manage urine collection samples.

### Consultation question 1: Key areas for quality improvement

Does this draft quality standard accurately reflect the key areas for quality improvement?

Stakeholders made the following comments in relation to consultation question 1:

* Support for the areas for quality improvement as they:
  + reflect the need to ensure prescribers are acting as antimicrobial stewards and prescribing appropriately
  + focus on accurate diagnosis and shortest duration for antibiotics which are priorities for UTIs
  + cover important aspects of care.
* Areas not addressed:
  + Advice and interventions on prevention.
  + Appropriate route of prescription (oral where possible)
  + Pregnant women
  + Diagnosis and management of UTIs for older people, including those in care homes and hospitals, and avoiding use of dipsticks
  + Long-term chronic UTI
  + Targeted antibiotic prescribing based on cultures rather than a focus on short durations.
  + Prophylaxis for UTI.
  + Alternatives to treatment of UTI with antimicrobials.

### Consultation question 2: data collection

Are local systems and structures in place to collect data for the proposed quality measures? If not, how feasible would it be to be for these to be put in place?

Stakeholders made the following comments in relation to consultation question 2:

* Local systems and structures are in place, or it is feasible to put such systems in place to collect data.
* Data collection and local audit is feasible at general practice, primary care network and provider level.
* NHS England’s Model Health System has a UTI section containing metrics that may be useful.
* NHS England, NHSBSA and PrescQIPP are in the process of developing new data reporting content for UTI.
* Data collection, monitoring systems and data sets are not in place for the measures.
* Most data management systems in secondary care are not set up to collect data for the measures, and clinical coding, prescribing and laboratory systems are often not integrated.
* Coding, documentation of symptoms and reviews of patient records would be required:
  + Documentation on symptoms is variable and a standard template (EMIS etc) would be required, but they would not be coded and require manual review.
  + Data is not routinely coded in primary care and hospitals; records would need to be reviewed manually.
  + Not all UTIs have codes.
* Structures are not in in place to record how many symptoms of a UTI are present when prescribing antibiotics
* Recording data may lengthen time of GP consultation.

### Consultation question 3: resource impact

Do you think each of the statements in this draft quality standard would be achievable by local services given the net resources needed to deliver them? Please describe any resource requirements that you think would be necessary for any statement. Please describe any potential cost savings or opportunities for disinvestment.

Stakeholders made the following comments in relation to consultation question 3:

* Statements are achievable.
* Integrated care systems may lack data analytical skills to co-ordinate and centralise data to drive improvement and strategic priorities.
* Clear guidance, and education resources are needed to achieve statements.
* Potential cost savings include reducing unnecessary antibiotic prescribing and improved efficiencies through appropriate first-line investigations for higher risk patients.
* Quality standard may result in increase in referral rate for recurrent UTI requiring ultrasound of the urinary tract (the primary investigation for recurrent UTI in most patients).

1. Summary of consultation feedback by draft statement
   1. Draft statement 1

Non-pregnant women aged under 65 years are diagnosed with a urinary tract infection (UTI) in the presence of 2 or more urinary symptoms, an absence of new onset vaginal discharge or irritation, and a positive dipstick test result for nitrite. **[new 2022]**

### Consultation comments

Stakeholders made the following comments in relation to draft statement 1:

Statement

* Statement 1 is not a priority for quality improvement.
* It should be replaced by a statement on obtaining a midstream urine sample and sending for culture prior to antibiotics for pregnant women and men.
* Statement is not supported because it differs from UKHSA/PHE guidance on diagnosis of UTI in non-pregnant women under 65 years. UKHSA / PHE guidance
  + does not recommend the use of a positive dipstick to diagnose a UTI
  + gives different advice on symptoms, number of symptoms, when to use dipstick tests and to what to test for (e.g. leukocyte and red blood cells).
* Is a switch in guidance, processes and behaviour change for diagnosing UTIs justified by the evidence? There are significant limitations to the reviews/metanalysis supporting the SIGN recommendation on which the statement is based.
* Statement should focus on signs and symptoms which are highly predictive, and not dipstick results.
* Statement would reintroduce reliance on dipsticks and could lead to dipstick only based diagnosis in practice.
* Dipstick testing:
  + Positive test for nitrite is not sensitive or specific enough to be used as proposed.
  + It is possible to have a UTI without the presence of nitrites in urine, dipsticks are also reputed to be unreliable.
  + In early phases of uncomplicated UTIs low bacterial counts are typical, so both leukocyte esterase and nitrites may be undetectable.
  + Nitrite tests can have false negatives (from excess hydration) and a negative nitrite test does not rule out a UTI.
  + Should include leukocyte esterase for increased accuracy.
  + Adds no benefit if a woman has 2 or more urinary symptoms and an absence of new onset vaginal discharge or irritation.
* Statement would require additional resources as dipsticks would be added into the diagnostic pathway for women under 65 years; this would impact on community pharmacies as they do not currently take urine samples.
* Statement does not include symptoms such as a fever, rigors, or flank pain, lower abdominal pain and cloudy urine which are predictive of UTI.

Measures

* There are issues with recording symptoms, coding etc. (see responses to consultation question 2 in section 3 of this report).
* Limiting the process measure denominator and outcome measure to trimethoprim, nitrofurantoin, fosfomycin or pivmecillinam would exclude a significant proportion of prescribing for UTI; significant prescribing of cephalexin and co-amoxiclav happens especially when 1st line treatments have failed.
* The suggested denominator has the common antibiotics and will give a reasonable subset of lower UTI patients (the most uncomplicated). It should state that this is not an exhaustive list, though.

Audience descriptors

* Service providers should include community providers of walk-in and minor injury services, and out of hours providers.
* Healthcare professionals should include nurses.
* Important to be clear that urine specimens are midstream.

Equality and diversity considerations

* Text refers to continence problems, but these mainly affect those aged 65 and over. The text should make clear it relates only to women aged under 65.

### Consultation question 4

For draft quality statement 1: Statement 1 is based on a SIGN guideline and aims to increase the probability of an accurate diagnosis of urinary tract infection. However, it differs from [Public Health England’s tool for diagnosis of urinary tract infections](https://www.gov.uk/government/publications/urinary-tract-infection-diagnosis). Will this difference cause problems in practice?

Stakeholders made the following comments in relation to consultation question 4:

* Yes, as the UKHSA / PHE diagnostic toolkit is well used by most clinicians in England and embedded into GP / provider systems.
* Two competing documents would not be helpful and would cause confusion.
* Consistency is needed between guidance otherwise practice will vary.
* Changing practice would require significant resource input so changes should be agreed by NICE and UKHSA.
* Why should SIGN guidance be used instead of UKHSA / PHE guidance?
* Potential problems for practice:
  + There could be an adverse impact on remote consultations; currently an uncomplicated lower UTI can be diagnosed over the phone based on signs/symptoms but statement 1 would require urine sample for nitrite testing.
  + Statement is impractical for general practice and community pharmacies as a nitrite test requires urine to dwell in the bladder for 4 hours before the testing.
* There is a difference in approach to vaginal discharge; statement 1 could exclude a significant proportion of women with a vaginal discharge who have a UTI.
* Neither the dipstick nor culture is accurate in diagnosing UTI; symptoms have been shown to be a better marker of infection.
* No, as NHS projects have shown such an approach can be effective.

### Consultation question 5

For draft quality statement 1: Is it feasible for community pharmacists to carry out the actions described in the statement?

Stakeholders made the following comments in relation to consultation question 5:

* Yes, but community pharmacists would need to be equipped to provide this service, additional training may be needed, and onward referral mechanisms set up.
* Yes, and would be welcome for ease and rapidity of access for treatment.
* Cases studies show this can be done by community pharmacists.
* Feasible, but what if nitrite test is negative? This does not rule out a UTI.
* Feasible for well-defined scenarios supported by protocols / standard operating procedures.
* Pharmacies are not able to process urine samples for urine dip stick analysis and / or culture.
* Risk that community pharmacists would not have access to full health records and could miss recurrent UTIs or not identify alternative causes of symptoms.
* Commissioning of community pharmacy to diagnose and treat UTIs varies.
* A pathway can be developed for pharmacists to be involved with diagnosis and treatment of UTI’s, but governance processes are required to give assurance that patients are not disadvantaged or put at risk of antimicrobial resistance / sepsis development.

### Issues for consideration

#### For discussion:

* What development source should statement 1 be based on: the SIGN guideline recommendation or the UKHSA / PHE guidance?
* If the development source changes, is the focus on non-pregnant women aged under 65 with 2 or more symptoms still the most appropriate?
* How likely is such a statement to change when UKHSA / PHE guidance is updated?
  1. Draft statement 2

Adults with indwelling urinary catheters do not have dipstick testing to diagnose urinary tract infections (UTIs). **[2015, updated 2022]**

### Consultation comments

Stakeholders made the following comments in relation to draft statement 2:

* Support or agree with the statement.
* Could the statement be extended to cover people aged 65 and over?
* To ensure a higher quality of patient catheterisation, the statement should require elements to be included in the patient record, such as origin of referral, reason for catheter insertion, type of catheter etc.

Rationale and audience descriptors

* Change text to say urine culture and sensitivity is used to *support* the diagnosis and pathogen rather than ‘confirm’. A positive culture does not confirm a CAUTI, nor does a negative culture rule out a CAUTI.

Measures

* Structure measure a): Feasible but labour intensive.
* Structure measure b): Not feasible or would require significant resource. A register of patients who are catheterised is complex due to the nature of how urinary catheters are supplied, e.g. some services are subject to contracts, some via providers and some via FP10 provision.
* Process measure (proportion of episodes of suspected UTI in adults with indwelling urinary catheters that are investigated using dipstick testing): Dipstick use for diagnosis is not consistently recorded. Audits and manual data collection would be burdensome. Not all Electronic Prescribing and Medicines Administration link indication to prescription.

### Issues for consideration

#### For discussion:

* Should the scope of the statement be extended to cover people aged over 65 without catheters (subject to there being an appropriate development source)?
* Are the measures feasible?
  1. Draft statement 3

Non-pregnant women are not prescribed antibiotics to treat asymptomatic bacteriuria. **[2015, updated 2022]**

### Consultation comments

Stakeholders made the following comments in relation to draft statement 3:

* Agree with statement.
* Difficult to define in older people if there are non-specific symptoms of fever and new delirium/confusion.
* Rationale needs caveat: treatment for asymptomatic bacteriuria may be advised by a specialist prior to certain urological procedures.
* Why are men excluded from this statement as asymptomatic bacteriuria in men also does not routinely need treating?

Measures

* Feasible in terms of data collection and local audit at general practice, primary care network or provider level. Unsure of use at integrated care system level.
* Can data be collected as laboratory samples do not identify which are asymptomatic bacteriuria? Using patient records would be resource intensive.

### Issues for consideration

#### For discussion:

* Is the statement measurable?
  1. Draft statement 4

Adults with an uncomplicated lower urinary tract infection (UTI) are prescribed the shortest effective course of antibiotics. **[new 2022]**

### Consultation comments

Stakeholders made the following comments in relation to draft statement 4:

Statement

* Agree with statement, but:
  + as new antibiotics are developed the 3-day shortest treatment duration may not appropriate
  + prefer statement wording to say 3-day course is for women with uncomplicated lower UTI and 7-day course is for men
  + the statement does not address longer courses for resistant infection or people who are at higher risk of treatment failure.
* Statement should be clear is relates to first line treatment only.
* ‘Shortest effective course’ is ambiguous, does this mean that antibiotics are prescribed until there is full resolution of symptoms?
* It is difficult to know the shortest effective course unless looking retrospectively.
* A significant minority of women are not asymptomatic after 3 days of antibiotics and have ongoing positive urine cultures/symptoms, especially with nitrofurantoin.
* 3-day courses are not effective as longer courses and have higher failure rates.
* Statement should allow healthcare professionals to give bespoke advice on when to stop antibiotics.
* Knowing local antibiotic resistance levels is key to effective and cost-effective empirical prescribing.
* Statement should not resort to immediate antibiotic prescribing, but appropriate clinical review and assessment to identify if other technologies/innovations could be of help.
* Length of course is contentious and whilst current guidance supports the shorter course, it is does not necessarily provide the strongest basis for a quality statement.
* There is no significant evidence to suggest that reduced courses in themselves reduce antimicrobial resistance; antimicrobial stewardship generally requires us to reduce inappropriate usage of antibiotics not necessarily the length of course.
* The rise in the incidence of recurrent UTI may be partly due to ‘inadequately treated’ uncomplicated UTI resulting in bacterial persistence.

Rationale

* The text ‘3-day courses of antimicrobials for treating uncomplicated lower UTI in non-pregnant women are as clinically effective as 5-10 day courses’ is not correct for all antibiotics e.g. nitrofurantoin 3 days is not as effective as a 5 or 7 day course. However, a 3-day course of ciprofloxacin or cotrimoxazole is as effective as a longer course.

Measures

* The measures audit the proportion of 3-day and 7-day courses which may not the shortest effective course (i.e., the one that produces clinical resolution without excessive antibiotic exposure).

### Issues for consideration

#### For discussion:

* Does the statement adequately describe / cover 3-day and 7-day course lengths?
* Does the statement adequately describe what should happen if there is no improvement?
  1. Draft statement 5

Adults with a recurrent upper urinary tract infection (UTI) or recurrent lower UTI where the cause is unknown are referred for further investigation. **[new 2022]**

### Consultation comments

Stakeholders made the following comments in relation to draft statement 5:

* Statement wording suggests all recurrent UTIs should be referred for further investigation.
* Are the referrals achievable and is enough detail provided?
  + The majority of young women with recurrent UTI will have no underlying cause apparent in primary care so would need to be referred, but there is no national referral/investigation pathway for this.
  + Is there sufficient capacity and expertise to accommodate the referrals? There is a lack of urologists required for investigation of recurrent UTIs.
  + Statement would lead to ‘over referral’; most recurrent UTIs can be managed by GPs in primary care.
  + Who would people be referred to and what investigations should be done?
  + Referral recommendations need clarification.
* Rise in incidence of recurrent UTI and problems relating to its management is already requiring greater involvement of urological services; therefore, the statement in many ways reflects what is happening.
* Links with NICE’s guideline on [suspected cancer](https://www.nice.org.uk/guidance/ng12) which recommends referral for bladder cancer in people aged 60 and over with recurrent or persistent unexplained urinary tract infection.
* Agree with statement but,
  + timescale for referral should be included
  + there is no reference to relapsed UTIs which are different to recurrent UTIs
  + should also include the need to refer adults with recurrent LUTI where the cause is unknown for investigation for cancer.
* Investment in programmes (such as UTI clinics for repeat UTI’s to enable patients to have access to specialist urologists for review), assessment and planning of treatment is needed.
* Many people can have problems over 5 years or more; how often is reinvestigation needed?
* Trusts often see repeat admissions with complicated UTI and bacteraemias; there does not seem to be a comprehensive system in place to investigate, with the aim of preventing re-admission.
* Would cultures also be expected for recurrent UTIs?
* How should clinicians manage patients with acute or recurrent UTI who receive apparently negative dipstick and culture results?

Definition

* Concern that the definition of a lower UTI says infection is ‘usually caused by bacteria from the gastrointestinal tract’ as this implies the normal urinary tract is sterile; there are also other causes of infection.

### Issues for consideration

#### For discussion:

* Is this statement achievable?
* Does the statement provide enough detail, e.g. on who people should be referred to, investigations, relapse and reinfection?

1. Suggestions for additional statements

The following is a summary of stakeholder suggestions for additional statements.

* Urine culture for:
  + adults with a urinary tract infection that does not respond to initial antibiotic treatment (as per existing statement 4 of QS90)
  + all men
  + all with suspected pyelonephritis.
* Reducing urine sample laboratory rejection rates and improving communication between primary and secondary care for reporting and interpretation.
* Assessment and diagnosis for people with a UTI for whom the presentation may be harder to diagnose or be atypical, e.g. people with learning disability and neurodiversity, dementia, and frailty.

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# Appendix 1: Quality standard consultation comments table – registered stakeholders

| **ID** | **Stakeholder** | **Statement or question number** | **Comments** |
| --- | --- | --- | --- |
|  | British Geriatrics Society | General | The BGS SIG support the updated quality standard. The the only question we would ask is ‘regarding men with uncomplicated UTI’. Would you refer for USS? |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | General | ‘UTI’ is used throughout the document without any definition / clarification when it is a spectrum of disease at the beginning, it is buried on page 17, but really important this is at the start of the document so it is not misused for other infections of the urinary tract e.g. febrile patients, pyelonephritis, urological abnormalities etc. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | General | Needs a definition of UTI – both upper, lower, uncomplicated, pyelonephritis etc at the beginning of the document. I would also question the equality impact of this guideline as male UTI is not included for review and managed very differently in the UKHSA/PHE document – that document could be read as “take male symptoms of UTI very seriously and try to fob off any women with UTI symptoms” – whilst the evidence available is different for men and women I think it would be worthwhile to update both if one is needed. |
|  | Chronic Urinary Tract Infection Campaign (CUTIC) | General | A quality statement is needed to establish the prevalence of patients with long-term chronic UTI, there is no data on this patient group. Chronic UTI specialists and GPs are reporting an increasing number of patients with on-going chronic symptoms. This could be due to antibiotic resistance, poor testing or shorter courses of antibiotics. We need further data to understand prevalence and causation.  A quality statement is also needed to establish the prevalence of patients whose infections are missed by the current dipstick and culture tests. There is no data following this cohort of patients and it is needed.  We are concerned that Quality Statement 5 [4] from the 2015 guideline has been removed. Statement 5 “Urine Culture for adults with a UTI that does not respond to initial antibiotic treatment” Data is needed for the incidence of treatment failure, especially given antimicrobial resistance. As treatment failure is 25%-30%, clinical guidance needs to be given for this cohort of patients. |
|  | Chronic Urinary Tract Infection Campaign (CUTIC) | General  Other points | * Given the current evidence has found that dipsticks and cultures miss up to 50% of infection how should clinicians manage patients with acute or recurrent UTI, but who receive apparently negative test results? Advice is needed urgently so that this patient group does not suffer unnecessarily because of the failure of the tests. * There is no advice regarding the appropriate collection of urine samples (eg not too dilute, what to do if frequency is high) and how to manage a situation where repeated samples are negative/show mixed growth/come back as possibly contaminated. These are quite likely to be hiding a multi-bacterial infection which are not measured by current laboratory testing systems. |
|  | Forte Medical Limited | General | Midstream urine is recommended for all LUTS urine collection especially in pregnant women, yet is not mentioned in several instances and summary flowcharts. The quality of the urine sample will impact the reported results from dipstick and lab. It is essential that midstream collection is highlighted wherever “urine specimen” is mentioned. |
|  | Healthy.io | General | The proposed quality statements provide an appropriate framework for delivery of services for the treatment of UTI in adults, with the requisite balance between individual patient safety and consideration of the risk of anti-microbial resistance associated with UTI.  Healthy.io has recently worked in partnership with the NHS, initially in Nottinghamshire & Derbyshire and subsequently in Lincolnshire, to put in place a community-pharmacy based service for the testing and treatment of uncomplicated UTI in non-pregnant women under 65 years. An evaluation of the Nottinghamshire & Derbyshire project has been published [here](https://emahsn.org.uk/images/Digital_UTI_Pathway_Evaluation_-_Final_v270720.pdf), and a subsequent study is underway to assess the impact, feasibility and cost-effectiveness of the approach in Lincolnshire. The service has addressed a number of the questions outlined in the QS questions, including the development of local systems for data collection, resources required for delivery, and overcoming problems in practice. |
|  | NHS England | General | * There is a need to reduce sample rejection rates. Laboratories tend to inform of sample rejections with an interpretive comment on the reason for the rejection however discussions show the details provided can vary. Aggregate reports for GP surgeries on the number of samples rejected, associated costs, (including the impact on the carbon footprint) would be beneficial and have the potential to improve practice. * Better communication between primary and secondary care to improve reporting and interpretation. * NHSE are looking to develop a ‘community of practice’ as a platform for sharing best-practice, peer-to-peer support, and research discussions. Our engagement has found ‘pockets’ of information/best practice but there is an opportunity for wider dissemination. |
|  | NHS England | General | We are happy to support this guidance from a primary care perspective.  The rationale for diagnosis and management, for limited use of antibiotics unless symptomatic (ie in pregnant women) and the duration of treatment is in line with all of the latest guidance that we are now working to in primary care. It also helps to reduce the over-use of antibiotics and any associated complications with AMR and CDiff. |
|  | NHS England South West Region | General | Response 1  [Management of suspected bacterial lower urinary tract infection in adult women. SIGN guideline 160](https://www.sign.ac.uk/our-guidelines/management-of-suspected-bacterial-lower-urinary-tract-infection-in-adult-women/). This guidance has not been adopted for national use in England. The current guidance adopted for use in England is the UKHSA [Urinary tract infection: diagnostic tools for primary care](https://www.gov.uk/government/publications/urinary-tract-infection-diagnosis)  This guidance should be used to inform the content of Statement 1. as it aligns with established NHS clinical practice in England. While the UKHSA are reviewing and updating the guidance, the existing version remains in place and continues to be used.  Response 2  Link to Update information does not work  Response 3  Use of SIGN guideline 160 for diagnosis does not align with current practice and resources or NICE UTI treatment guidance which references UKHSA Urinary Tract Infection, diagnostic tools for primary care. |
|  | Pelvic Obstetric and Gynaecological Physiotherapy | General | In perimenopausal women and postmenopausal women under 65 has the Uro-genital atrophy-British Menopause society consensus statement been taken into account in terms of topical vagina oestrogen and pelvic floor dysfunction?  <https://thebms.org.uk/wp-content/uploads/_pda/2021/07/09-BMS-ConsensusStatement-Urogenital-atrophy-JUNE2021-01B.pdf?t=60dd9d660724f> |
|  | Royal College of General Practitioners | General | **Suggested change in wording.**  There are many people who may present with urinary tract infection for whom the presentation may be harder to diagnose or be atypical. This includes those with learning disability and neurodiversity, those with dementia and frailty. This can make a diagnosis harder (accepting that in some cases the pulse, BP, temperature may remain normal for a considerable time. We wonder whether NICE should include a statement that might address this inequality and to enhance the assessment and management of these disadvantaged groups.  **From**  Patients with learning disability and neurodiversity have a shorter life expectancy, increased morbidity, increased risk of unplanned hospital admission and increased duration of inpatient stay. Urinary tract infections contribute to this and so to ensure this NICE guideline addresses the inequality of care offered to this group of patients it should address the following factors in affecting patients with LD or neurodiversity:   * The high incidence of undiagnosed constipation which contributes to the increased incidence of UTI * The higher incidence of urological abnormalities and urological malignancies bearing in mind that in older patients routine paediatric radiological assessment might not have been undertaken * UTI should be considered when the patient presents with the classical urological symptoms but also when there are changes of behaviour and activity – to determine this those who support the patient should be asked about “change from before” * Urological infection can lead to sepsis and sepsis is more frequently missed because the classical parameters of raised pulse, raise temperature etc may be absent * In spite of the need for a multidisciplinary team assessment to determine “best of interests” and the reasonable adjustments which need to be undertaken to undertake them, patients with LD and neurodiversity should be fully and appropriately investigated for contributory causes. * In the management of treatment the medication doses etc should be appropriate to the patient and should be discussed with the carers. * Documentary advice on the prevention of recurrences should be appropriate to the communication skills of the patient and all responsible teams should have access to such a “Easy Read” literature |
|  | UK Health Security Agency | General | Micro colleagues were happy with the document in regard to prompts to perform culture, mostly this seemed to be focused on the catheter associated UTIs. With recurrent cases it suggest referral of the patient but would it not also be expect for cultures to be done? |
|  | UK Health Security Agency | General | Yes…major topics discussed…linking to prostatitis is also important as often overlap with complicated UTI in men. |
|  | British Association of Urological Surgeons | Question 1 | A number of areas are addressed but there are concerns relating to statement 1 and what might be perceived as an increased emphasis on dipstick testing. There is also concern relating to statement 4 where although there is certainly evidence supporting the usage of shorter courses, this does need to be interpreted in the light of increasing recurrent UTI which ***may*** itself be at least partly associated with inadequate initial treatment and subsequent bacterial persistence.  Over the past decade, the diagnostic utility of dipstick has been increasingly questioned so it seems odd to increase emphasis on the usage of this. The issue with length of course is a contentious one and while current guidance does support the usage of the shorter course, it is does not necessarily provide the strongest basis for a ‘quality standard’ given the concerns. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Question 1 | I disagree that adding nitrite positive in to signs/symptoms in uncomplicated lower UTI in women <65yrs is a priority for quality improvement. The test is not sensitive or specific enough to be used in this way and although is likely to reduce antibiotic prescribing, it is likely to be reducing appropriate prescribing for women with a UTI but who have negative nitrites (may cause consequences downstream including need for repeated courses of antibiotics).  Recording of dipstick results in primary and secondary care is patchy – very few places use automated readers that upload results directly, relying on manual typing of the result into patient record, how would this be done in other setting such as community pharmacy? |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Question 1 | Statement 1 is impractical see answer to question 4 below. Would prefer monitoring compliance with PHE tool for diagnosis of UTI instead |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Question 1 | I’m not sure excluding leucocyte esterase from evaluation of positive dipstick and focussing entirely on the nitrite is a priority – accurate diagnosis is a priority not eliminating rarer UTI possibilities. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Question 1 | Yes, these statements accurately reflect the need to ensure prescribers are acting as antimicrobial stewards and prescribing appropriately. Rational prescribing not only improves patient care, it also reduces financial and environmental costs, which in the current context and given current concerns of health professionals and managers would be worth including in rationale. The focus on accurate diagnosis is particularly pertinent for UTIs. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Question 1 | Could statement 2 asking for dipstick testing to be avoided be extended to include those aged over 65 also – this would also support the aim of avoiding incorrect diagnosis of UTI.  Two related important issues which have not been addressed are:   * Appropriate route of prescription – oral where possible, but agree that shortest appropriate duration is priority across primary and secondary care * Prevention – ensuring appropriate advice and interventions on prevention, including hydration in care homes as per recent guidance. |
|  | C.R Bard Inc | Question 1 | Draft quality standard statement 2 sets a low bar for the treatment of catheter acquired urinary tract infections. Whilst dipsticks have been proven to be ineffective in diagnosing UTIs in cases of indwelling urinary catheters, a higher quality of treatment should be required of healthcare professionals when considering or following up on patient catheterisation. With this in mind, quality standard statement 2 should require that the following elements are included in a patient’s care records, when a catheter is put in place:  1. The origin of a referral: Monitoring the origin of a patient referral is a crucial aspect in establishing common patient pathways and includes which hospital unit a referral was made from, or whether it originated from a GP, a rapid response team or another district or community service.  2. Where the patient is currently being treated: recording a patient’s location is a crucial aspect in providing continuous care between clinical and community settings and includes whether a patient is being treated at home, in hospital, in a nursing home or in other forms of residential care.  3. What type of catheter is being used: recording whether a urethral or suprapubic catheter is being used is key in ensuring the best possible patient treatment.  4. Timeline of catheter insertion: a key cause of CAUTIs is inaccurate timelines of catheterisation. Recording when a catheter is inserted is key in establishing the duration of patient catheterisation.  5. Reason for catheter insertion: Establishing and recording why a catheter has been used is key in curbing excess catheterisation and should include reasons like urinary retention, bladder outlet obstruction, neurological, sacral / perineal wound in an incontinent patient, end of life comfort, instillation of medication and patient choice.  6. Details of catheter review: recording a proposed timeline for review of particular catheter use should also be recorded in order to avoid the inappropriate use of extended catheterisation and the consequent risk of CAUTIs. These review details should include options such as: a review of the need for a catheter, a date for removal or trial without a catheter (TWOC), a referral for district nursing review or TWOC, a referral for urological review or TWOC, a referral to community continence services, the use of a patient held plan (catheter passport).  7. CAUTI instance: of primary importance for our discussion here is that a record is kept of patients with a Catheter in situ who are being treated for a urine infection with antibiotics and a breakdown of how many of these infections are thought to have been related to the use of the catheter.  Furthermore, while the duration of antibiotic courses is a crucial consideration in effective prescribing, duration should not be prioritised over targeted prescribing in order to eliminate the use of broad spectrum antibiotics.  The latest report (2020 – 2021) from the English surveillance programme for antimicrobial utilisation and resistance (ESPAUR) found that the burden of antibiotic resistance increased by 4.9% between 2016 and 2020. It also concluded that the number of Bloodstream Infections caused by pathogens resistant to one or more key antibiotics increased from 14,829 in 2016 to 15,549 in 2020. A key conclusion from this research was that in 2020 one in five people had an antibiotic-resistant blood stream infection.  Prioritising the swift and accurate diagnosis of UTIs should be a priority in order to maximise the use of targeted antibiotic prescribing. Focusing solely on quick antibiotic courses overlooks the broader need to target prescribing in order to reduce antimicrobial resistance going forward. |
|  | Chronic Urinary Tract Infection Campaign (CUTIC) | Question 1 | No, there need to be a focus on:   * Patients who fail treatment (prevalence data and clinical guidance) * Patients whose infections are missed by the current dipstick and culture tests (prevalence data and clinical guidance) * Data on patients with long-term (chronic) UTI and clinical guidelines for these patients. This patient group is being ignored by NICE. * Emphasis needs to be placed on sending patients with recalcitrant infections to national specialist centres, where experts in AMR with more specialist testing can treat these infections. * An evaluation of the newer generation of tests used to diagnose UTI, for those patients with hard-to-treat infections. |
|  | Forte Medical Limited | Question 1 | No; it does not take account of the GIRFT Pathology recommendation for urine collection quality audit that points to high rates of urine specimen contamination due to lack of instruction for Midstream urine collection as recommended by NICE, NHS, SIGN and other guidelines |
|  | GSK | Question 1 | Does this draft quality standard accurately reflect the key areas for quality improvement? GSK would advocate that the existing quality standard: *Quality statement 4: Urine culture for adults with a urinary tract infection that does not respond to initial antibiotic treatment* should continue to remain as a quality standard, to ensure correct antimicrobial prescribing and reduce the rates of treatment failure and prolonged QoL impact on patients. |
|  | Healthy.io | Question 1 | Yes, this draft quality standard accurately reflects the key areas for quality improvement. |
|  | NHS England | Question 1 | * No- we would prefer ‘Obtain a midstream urine sample from pregnant women and men before antibiotics are taken and send for culture and susceptibility testing’ to replace statement one * Reviewers might also want to consider the role of continence services in the management and prevention of recurrent UTI and UTIs more generally linking with the [Overview | Urinary incontinence in women | Quality standards | NICE](https://www.nice.org.uk/guidance/qs77) and standards [Overview | Pelvic floor dysfunction: prevention and non-surgical management | Guidance | NICE](https://www.nice.org.uk/guidance/ng210). By linking the standards providers of care will be supported in quality improvement initiatives where there are interdependencies between specialities * Suggest adding a sub-question for if people answer ‘no’, where do they see the gaps? |
|  | NHS England | Question 1 to 6 | These should all be deliverable.  Statement 1 indicates the use of diptesting which may cause some concern as in this cohort there has been a move away from diptesting.  If we agree to diptesting we need to educate the public on how to ensure a “mid stream” specimen, ie a clean catch and not a first catch. This will limit false positives and inaccurate results.  There may be some push back from pharmacies on diptesting, and this in turn may impact on local service provision through “Think pharmacy” and “Pharmacy First schemes”.  In terms of reducing antibiotic prescribing and especially in UTIs some areas have developed schemes to support a reduction in antibiotic prescribing and improved uptake of education in UTIs. |
|  | NHS England South West Region | Question 1 | Response 1  No. There is a missed opportunity to improve the appropriate use of urine culture testing for all men with a suspected UTI, all adults with suspected pyelonephritis, and all adults who may be at high risk of an antibiotic resistant UTI.  Response 2  Yes  Response 3  Missing areas for QS  1. Appropriate urine sampling – how and who – see UKHSA diagnostic guidance.  2. Prophylaxis for UTI – options including time on prophylaxis/ ensure review within 3-6 months. |
|  | Pelvic Obstetric and Gynaecological Physiotherapy | Question 1 | Uro-genital atrophy and associated increase in UTI-Pelvic floor muscle training- Pelvic floor muscle training to be considered a valid option for treating uro-genital atrophy  Mercier J, Morin M, Zaki D, Reichetzer B, Lemieux MC, Khalifé S, Dumoulin C. Pelvic floor muscle training as a treatment for genitourinary syndrome of menopause: A single-arm feasibility study. Maturitas. 2019;125:57-62. |
|  | Purple Orchid Health Ltd | Question 1 | Why have alternatives to treatment of UTI with antimicrobials not been included? |
|  | Purple Orchid Health Ltd | Question 1 | TREATMENT /Alternative treatment: The document does not seem to consider the evidence for alternatives to treatment of UTI with antimicrobials. Intravesical GAG replenishment instillations (medical devices) provide an alternative option either 1. alongside antibiotics or 2. An alternative to starting a patient on one antibiotic and potentially changing antibiotic after culture results 3. Instead of antibiotics particularly for recurrent UTI patients. (Retrospective evaluation of efficacy and safety of 0.2% chondroitin sulphate in urinary tract infections in comparison to treatment of UTI with long-term low-dose antibiotics Rahnama et. al. 2016) |
|  | Purple Orchid Health Ltd | Question 1 | RECURRENT UTI/ Management and treatment: The importance and evidence for GAG replenishment as prevention of recurrent UTIs should be considered in line with the recommendations of EAU for the treatment of recurrent UTIs in adult women, where non antimicrobial prophylaxis (e.g. endovesical instillations) is ranked higher and given priority over the use of antibiotics (Grabe, M., R. Bartoletti, and T Bjerklund Johansen, Guidleines on urological infections. European Association of Urology, 2015.  Rahnama et al 2016 showed significant improvement in QoL score and decrease in recurrence of infections rates P<0.0001 when 0.2% CS instillations were given to patients versus long term low dose antibiotics. GAG replenishment products are medical devices and published data should be considered in light of the data required for regulatory approval by MHRA and not against clinical data required for POM. |
|  | Purple Orchid Health Ltd | Question 1 | TREATMENT/Alternative treatment: self-management strategies which can be taught/learnt which help patients cope with pain, urge and frequency related to UTI and which may reduce the number of patients seeking antimicrobials for early treatment of UTI should be considered. Pain management using self-management techniques with measurable results are shown to be highly effective for bladder flares which then resolve within a few days and subsequently don’t require antimicrobials. Feel Free chronic pelvic and bladder pain online programme is and e.g. of such a programme. |
|  | Purple Orchid Health Ltd | Question 1 | SELF CARE/DELAYED PRESCRIBING: This guideline appears restricted in its scope for treating UTI in relation to published data for management and alternative treatments including the role of self-management techniques past drinking water and using paracetamol and ibruprofen for pain relief 1.3.1 and 1.3.2 |
|  | Royal College of General Practitioners | Question 1 | It would appear to cover important aspects of care in people with UTI – however the diagnosis is commonly and recurrently made in older people with reports of increased confusion within a residential / nursing care setting as well as within hospital environments. These patients often are provided with frequent courses of antibiotics and hence are at risk of significant antimicrobial resistance. Should the guidance be looking at this very common area of management in some way. (The parameters chosen are specific measurable and achievable – but not routinely recorded in a simple retrievable manner, We think we may be missing a major problem elsewhwere if we ignore the presumptive diagnosis so common in older people with “confusion”).  One member responded to our internal consultation to highlight the specific needs of patients with learning disability and neurodisability where there can be complexities in the diagnosis – again challenging and important but harder to evaluate with standards that are measurable). |
|  | British Association of Urological Surgeons | Question 2 | For many of the systems, data collection is likely to be in place. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Question 2 | The data sets are not in place and would be a lot of work to implement. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Question 2 | I don’t think structures are in place to record exactly how many symptoms of a UTI are present when prescribing antibiotics. Whilst one could come up with tick boxes when urine culture is requested from LIMS systems, I don’t know how it could be done in the empirical prescribing category. I also think limiting the denominator to piv/trim/fosfo/nit would exclude a significant proportion of prescribing for UTI and overly select those HCW adhering/following a guideline as significant prescribing of cephalexin.co-amoxiclav does happen especially when 1st line treatments have “failed”.  I think one could only collect this data by sampling designated GP practices/pharmacy records |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Question 2 | Worth noting in rational the environmental sustainability benefits (as its now mandatory for healthcare providers to report on environmental impacts (carbon emissions)) and cost savings of reducing unnecessary prescribing. To help to address concerns about resource requirements. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Question 2 | Would need to build templates to record the data in various IT systems and then extract the data to produce reports. It is doable however it would be a significant amount of work to set up. Recording the data may add to the length of the consultation which is only 10 minutes for a GP. |
|  | C.R Bard Inc | Question 2 | There are currently no local or national systems and structures in place to collect data for these proposed quality measures. This is proven by the fact that the draft guidance outlines that “no routinely collected data has been identified” for monitoring any of the draft quality statements 1, 2, 3, 4 or 5.  In April 2020, data reporting on pressure ulcers and urinary infections in patients with catheters via The National Safety Thermometer was brought to an end. The aim of the National Safety Thermometer was to provide a mechanism by which these two patient harms could be tracked and monitored for improvement purposes. While, in reality, the National Safety Thermometer was an imperfect system in terms of the quality of data collected, it did provide a mechanism by which continence care could be monitored and targeted improvements could be made across the NHS. In its place, the onus was put on NHS trusts to report on their continence care. However, 2022 – 23 NHS Standard Contract removes this onus and no longer requires trusts to provide an annual report on the instance and treatment catheter acquired urinary tract infections and pressure ulcers.  This means that, currently, no centralised data collection or monitoring system exists in the NHS to track the number of cases, treatment and improvement of catheter associated urinary tract infections. Without this central data collection and analysis, it is impossible to assess the scale of the impact that CAUTIs have on the NHS. It is also impossible to gauge the need for, and success of, targeted improvement measures to improve the standard of patient catheterisation and is impossible to hold trusts accountable at a national level for where patient care falls short of what is expected. Therefore, it is vital that a national system collecting data on patient catheterisation and CAUTI instance through a dedicated SNOMED code is introduced across England. This will be crucial in monitoring the impact of improvement measures and targeted approaches across the NHS. |
|  | Chronic Urinary Tract Infection Campaign (CUTIC) | Question 2 | Statement 1 – No, as dipsticks are not an effective marker for infection so any data collection or quality measure would be inaccurate. Symptoms are a better predictor.  Statement 4 – longitudinal studies need to be conducted before 3-day courses of antibiotics can be routinely recommended. Data needs to be collected urgently, specific research needs to be undertaken with the additional costs associated with this.  Statement 5 – referral to specialist centres for patients with ongoing symptoms is urgently needed. However, these need to be national, specialist referral centres. There needs to be a specific code for patients with ongoing chronic symptoms so that national data can be collected and prevalence established. |
|  | Forte Medical Limited | Question 2 | Midstream urine can be collected either by giving Start-Stop-Start instructions or by recommending that the healthcare professional seeks an alternative method, eg by specially designed devices. This is easily implemented if the importance of specimen quality is highlighted to all involved in the LUTS pathway. |
|  | Healthy.io | Question 2 | Yes, local systems and structures are in place or it is feasible to put such systems in place.  For instance, for QS1, existing patient record systems in place in pharmacy, general practice and provider organisations could enable templates for use in recording symptoms and dipstick results. Such records could, with appropriate coding, be easily sent to general practice to include within a patient’s record to ensure continuity of care. At Healthy.io, we have developed a smartphone-based diagnostic test that enables users to test their urine using their smartphone camera in place of a point-of-care-test, with the results integrated into primary care records, and a similar approach could be developed by providers for the delivery and monitoring of the QS outlined in the draft consultation. |
|  | NHS England | Question 2 | * The UTI section on model health system provides metrics that may be useful. * Indicated below (Qs 3-5) regarding the feasibility of some of the data collection. |
|  | NHS England South West Region | Question 2 | Response 1  No, currently many local systems do not adequately support efficient data capture and/or collection. However NHS England, NHSBSA and PrescQIPP are in the process of developing new data reporting content for UTI and these may be suitable to support QS reporting. However these dashboards rely on routinely reported data and currently antibiotic supply by a PGD (community pharmacy, walk-in and minor injury units) is not necessarily captured or reported in routine data sets.  Response 2  Much of the data collection requires locally obtained data. Documentation on symptoms will be variable and a standard template (EMIS etc) would be required which may encourage completion but they still wouldn’t be coded requiring a manual review of each patient.  Response 3  Much of this data is going to be near impossible for collection without good coding.  Response 4  QS1 Dependent on accurate coding and documentation of symptoms. Time consuming to collect, requires individual patient record review. Computerised decision support systems for UTI pathways could help.  QS2 Requires individual patient record review to ascertain if dipstick performed – time consuming.  QS3 Individual pt record review. Relies on documentation of symptoms for accurate measure.  QS4 relies on accurate coding of type of UTI – course lengths Vs gender data easily available. |
|  | Royal College of General Practitioners | Question 2 | The data could be obtained from hospital / community / GP records where a UTI diagnosis is made however the computer / hand written records would probably need reviewing manually as the data required is not routinely coded (certainly) in primary care to demonstrate achievement. This might if considered significant enough be part of a national audit programme.  To computerise hospital medical records and ensure appropriate coding would take considerable time, and in primary care where computerised medical records more widespread not all data is coded. (Of hospitals that have computerised medical records, many of those are not fit for purpose to obtain this data routinely. |
|  | UK Health Security Agency | Question 2 | Most of the data management systems within secondary care are not set up to collect this level of data; clinical coding, prescribing and laboratory systems are often not integrated. Substantial investment would need to occur, including investment in technology and personnel to collect the recommended data. The current need could only be met with significant manual data collection and audit which is not currently possible due to work force constraints. Look to recent CQUIN work to estimate additional burden on trusts.  Capturing data on urinary symptoms is not systematic or easily auditable without note trawling which is highly inefficient.  Capturing data on recurrence is difficult at a local level..who’s responsibility is this; GP? ; an individual may access multiple providers for advice and treatment with often poor clinical oversight overall.  At a Trust level we often see repeat admissions with complicated UTI and bacteraemias….there does not seem to be a comprehensive system in place to investigate, with the aim of preventing re-admission. Certainly the approach in secondary care is very reactionary. Very few get referrals, and if they do time-lines are too long. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Question 2 | GP coding for UTI is notoriously bad – there are so many codes that can be used for UTI so auditing is difficult (from experience). The suggested denominator data on page 5 for QS1 has the common antibiotics but it should state that this is not an exhaustive list as other agents are frequently used (e.g. in allergy, previous resistance etc) however the list provided will give a reasonable subset of lower UTI patients (the most uncomplicated).  With regards to QS5, the diagnosis of recurrent upper UTI may be difficult to audit, as likely to have been seen by variety of providers (GP, out-of-hours, hospitals) for upper UTI. |
|  | British Association of Urological Surgeons | Question 3 | There may be a slight increase in referral rate for recurrent UTI based on this guidance which may result in some increase in the need for ultrasound of the urinary tract (the primary investigation for recurrent UTI in most patients). |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Question 3 | Think QS5 may not be achievable even if increase in net resources, as lack of national pathway/guidance for investigation of recurrent lower UTI and implications on urologists required/prepared to deliver this. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Question 3 | I do not envisage that this will cause problems in practice. The concern might be (as with any quality statement) that providers are penalised where there are justified exceptions to the rule. The list of symptoms of UTI excludes fever which is appropriate in this context. |
|  | Chronic Urinary Tract Infection Campaign (CUTIC) | Question 3 | Statement 4 above - research funds needed for follow up studies. |
|  | Forte Medical Limited | Question 3 | Yes, recommendations can be achieved IF everyone involved in the pathway is clear about requirements; national parity in LUTS diagnosis and treatment is essential. Current disparity in outcomes is detailed in the GIRFT Pathology Report 2021 (https://www.gettingitrightfirsttime.co.uk/clinical-work-stream/pathology/) |
|  | Healthy.io | Question 3 | Yes, each of the statements in the draft quality standard would be achievable by local services given the net resources to deliver them. In many cases, the quality standards may generate cost-savings by reducing unnecessary antibiotic prescribing (Quality Statements 1, 3, 4) whilst others improve efficiencies by ensuring appropriate first-line investigations for higher risk patients. |
|  | NHS England | Question 3 | * Statement one would require additional resource as dipsticks would be added into the diagnostic pathway for women under 65 years. * Standards 3, 4 and 5 are feasible in terms of data collection as local audit and data collection would be feasible at general practice, primary care network or provider level. However, unsure of the data analytical skills at the integrated care system level to co-ordinate and centralise data to drive improvement and strategic priorities within the integrated care systems. |
|  | NHS England South West Region | Question 3 | Response 1  No. If urine dipstick use was adopted as per proposed QS 1. There would be a financial impact. There will be a resource impact for community pharmacies who do not currently handle urine samples.  Response 2  Increase in dipsticking will lead to increased costs – from the UKHSA guidelines where not all under 65 women have a dipstick to all of them. There will be service impacts for statement 5 and the impact would need to be assessed.  Response 3  Achievable with clear guidance, use of education eg RCGP TARGET, HEE eLFH, resources. Behaviour change around dipstick testing still required – embedded behaviour despite multiple efforts to influence. Will take extra resource including for increased dipsticks. |
|  | Royal College of General Practitioners | Question 3 | These statements to our understanding would fit in with most clinicians in primary care are already doing. We have already described the problems in system wide evidence to demonstrate implemented. |
|  | UK Health Security Agency | Question 3 | The draft statements should be achievable with current resource, it does however require ongoing education of healthcare workers; the collection of data is currently not sufficiently integrated into clinical care. |
|  | British Association of Urological Surgeons | Question 4 | This standard implies that one has to have a positive dipstick test for nitrates to receive a diagnosis which is problematic and even contrary to existing guidance which does not require this in the presence of 2 or 3 symptoms. Furthermore there is no mention of leukocytes or haematuria both of which can also be indicative of UTI and increase sensitivity. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Question 4 | The PHE toolkit is well used across England and is embedded into some GP/healthcare provider systems, moving towards the SIGN guidance without providing a rational/evidence base to do so will cause confusion.  There may also be an impact around remote consultations with this – for example, currently an uncomplicated lower UTI can be diagnosed over the phone based on signs/symptoms with no requirement to obtain a urine sample for nitrite testing during the consultation, has the impact of this been considered? |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Question 4 | The nitrite test requires urine to dwell in the bladder for 4 hours before the test is done to allow time for bacteria to reduce nitrate to nitrite. This test is impractical to do in general practice as the patient will have to bring a sample in 4 hours after consulting about symptoms. GPs are under enough pressure to deliver services without having to create extra appointments for urine dipstick testing. It may not be feasible to achieve a 4-hour dwell time in patients with urinary frequency and urgency.  Although improving diagnostic testing is desirable the nitrite tests is neither sensitive enough nor is it practical to do. Alternative technologies are needed. Lateral flow tests are on the market in the USA.  The PHE guidance is more pragmatic to diagnosis of UTI. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Question 4 | I think the PHE guideline is used – I’m not clear what the advantages of this will be and I think it will cause confusion |
|  | Chronic Urinary Tract Infection Campaign (CUTIC) | Question 4 | See previous comments on the inefficacy of dipstick tests. There needs to be a complete overhaul of the testing recommendations in the guidelines, neither the dipstick nor culture is accurate in diagnosing UTI; symptoms have been shown to be a better marker of infection. The guidance given in the SIGN and Public Health England’s guidelines are misleading to both clinicians and patients. |
|  | Forte Medical Limited | Question 4 | Both SIGN and PHE guidelines stipulate MIDSTREAM URINE should be tested yet it is not mentioned throughout the document, where urine specimens are mentioned, or in the flowcharts as provided. See 1.1.3 and 1.1.6; Figure 1 no reference of midstream collection although stipulated by guidelines as required. 7.1 discusses how to provide a urine specimen but does not mention or explain in reference to MIDSTREAM, although stipulated by guidelines.  <https://www.nice.org.uk/guidance/ng109/chapter/Recommendations#treatment-for-women-with-lower-uti-who-are-not-pregnant>  <https://patient.info/mens-health/urine-infection-in-men/midstream-specimen-of-urine-msu>  <https://www.sign.ac.uk/media/1050/sign50_2019.pdf>  All guidelines should chime in relation to the nature and quality required of a urine specimen otherwise clarity is impossible and practice will vary nationally, creating “national lottery” diagnosis and treatment success. |
|  | Healthy.io | Question 4 | No, this will not cause problems in practice. Evidence from Healthy.io’s NHS projects in Nottinghamshire & Derbyshire and Lincolnshire have demonstrated that such an approach can be effective in terms of quality and efficiency and is acceptable to patients and service providers. |
|  | NHS England | Question 4 | * Yes, this difference will cause problems in practice. A recent national workshop held by the AMR programme at NHSE ascertained that the majority of clinicians use the PHE guidance on UTI diagnosis. This change in practice would also have cost implications. * Yes – a number of former CCGs and primary care networks have invested heavily in training to support the application of the current UKHSA guidelines / flow charts. Of course, if there is strong evidence to change then resources will be required to implement a change in practice. For example, many GP computer systems have been automated with alerts to reflect the current UKSHA flow charts. Where there is conflict in guidelines, clinicians will have less confidence in the evidence base for both sources. Changes should be agreed between NICE and UKSHA. * Do not think the wording *‘cause problems in practice’* is very clear – problems is a vague term. Suggest alternative wording *‘will this difference negatively impact delivery in patient care’*. |
|  | NHS England South West Region | Question 4 | Response 1  Yes. Please see the response below under Statement 1, Response 1  Response 2  A large amount of work has been done to implement the PHE tool for diagnosis of urinary tract infections so changing it to the SIGN guideline will require a new focus. I cannot see any documentation to understand why the SIGN advice was chosen over the PHE/UKHSA and this would be necessary to ‘bring clinicians along’. The SIGN advice seems more ‘woolly’ than the PHE guidelines in the fact it states that a negative nitrite doesn’t rule out a UTI.  Response 3  Yes it will cause problems in practice and dipstick non beneficial. See below in statement 1, response 3.  Response 4  Probematic – only implement if evidence concrete for required switch in practice – liaise with UKHSA? Behaviour change is slow and resource heavy to implement. Many documents, guidelines embed UKHSA guidance so would require resource to amend. Justified increased use of dipstick in 16-64 year? Potential confusion with change in messaging. |
|  | Royal College of General Practitioners | Question 4 | These areas are usually identified so better to be explicit about basing on different guideline. The guidance from PHE appears to suggest that around 70-80% with a vaginal discharge will not have a UTI. This suggests that 20-30% with a vaginal discharge do have a UTI. Are the QS group happy that 20-30% of people presenting with UTI and vaginal discharge symptoms (certainly not uncommon in primary care) who have treatment withheld will not be harmed by this standard? |
|  | British Association of Urological Surgeons | Question 5 | While it may well be feasible, there is a danger of shifting UTI diagnosis to one primary based on an inadequate diagnostic test (dipstick) rather than symptoms. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Question 5 | Community pharmacists could be equipped to provide this service, however still underlying issues with the QS as per comments below. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Question 5 | No - see the answer to question 4 about the requirement for a 4-hour dwell time of if urine in the bladder before doing a nitrite test. This will require patients to bring a sample in 4 hours after consulting about symptoms.  It may not be feasible to achieve a 4-hour dwell time in patients with urinary frequency and urgency. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Question 5 | I think it is feasible for community pharmacists to collect this data as generally their prescribing will be on a specified guideline/proforma and have no added nuances that a GP may assess/record (or not record). |
|  | Chronic Urinary Tract Infection Campaign (CUTIC) | Question 5 | Yes, they can, but using nitrites on a dipstick to make a diagnosis of UTI with lead to missed infections.  Symptoms need to be given more importance when making a diagnosis. |
|  | Forte Medical Limited | Question 5 | Yes if they have the appropriate facilities and equipment. Pharmacy UTI diagnosis and treatment would shorten Primary Care GP waiting lists and footfall. |
|  | Healthy.io | Question 5 | Yes, this is feasible and has been supported by the case studies outlined above. |
|  | NHS England | Question 5 | * Community pharmacy would need to consider purchasing of dipsticks, storage of dipsticks, disposal of waste generated and audit of these processes. * Feasible – yes. However, provision of training in safeguarding and other risks for certain patient populations is required. Also concerned regarding data linkage and recurrent UTIs if patients accessing a number of healthcare providers If a woman attends a GP practice, a urine culture can be sent, previous antimicrobial resistance data can be accessed to guide prescribing decisions, and further presentations with UTI will all be within the primary care record so that women with recurrence can be identified and offered prophylaxis as needed. Furthermore, women who do not actually have UTI will have the opportunity to gain an alternate diagnosis and be offered appropriate management for the cause of their symptoms – for example, female genital mutilation, atrophy, endometriosis or sexually transmitted diseases.   If this consultation proceeds at the pharmacy, then all of these benefits to the longer-term care of these women will be lost. We will occasionally pick up haematuria on dipstick which does not resolve with symptoms and needs secondary care follow up to exclude urological cancer – how will this be managed within a pharmacy? |
|  | NHS England South West Region | Question 5 | Response 1  Commissioning of NHS community pharmacy of services to diagnose and treat suspected LUTI varies by NHS commissioner.  Not all service providers are able to process urine samples for both urine dip stick analysis, and/or urine sample for culture.  There will be a resource impact for community pharmacies who do not currently handle urine samples.  Response 2  Diagnosis should be on clinical symptoms and presentation to identify if an infection is present and should not include a urine dip stick as this can be inaccurate presence of an organism within the bladder does not indicate an infection or the need for antibiotics to be prescribed.  A pathway can be (and is already developed in some area’s) for pharmacists to be involved/assist with prescriptions of diagnosis/treatment of UTI’s however this needs to be monitored with strict processes and pathways in place to give assurance that patients are not disadvantaged or put at risk of AMR/sepsis development. Identify the learning from systems in place and build upon with a good governance assurance process.  Response 3  Yes it is feasible for a community pharmacist to review a women under 65 for a possible UTI, assess if they have 2 symptoms and undertake a dipstick for a positive nitrite. However what will be harder is if a patient doesn’t have a positive nitrite where SIGN advises this doesn’t rule out a UTI. They do not have the ability to send in urine samples  Response 4  Just drop the dipstick  Response 5  Yes. Opportunity to build in measures to ensure keep to quality standard/measure outcomes. Ensure renumeration for consultation if negative for UTI and no supply ie no incentive for supply. National PGD could align practice. If need for urine sample eg symptomatic but negative nitrite in SIGN would require referral as no access to urine sampling and processing currently. |
|  | Royal College of General Practitioners | Question 5 | At a pragmatic level any reasonably trained health care professional (especially if trained to independent prescriber level) would be able to manage this situation. A dilemma is many of the cases seen in primary and secondary care are people with recurrent symptoms. The quality standard is not clear as to whether the statement 1 applies to an acute event perhaps every 1-2 years or could be a presentation every 1-2 weeks in which case very different management plans would be appropriate. We would support appropriately trained clinicians managing within protocols / directions / SOP fairly well defined scenarios. |
|  | UK Health Security Agency | Question 5 | Yes, and would be welcomed for ease and rapidity of access for treatment. Electronic capture systems could easily be developed to capture symptoms, and prescribing data. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Question 6 | Yes, have implemented the NICE UTI guideline in primary and secondary care locally (with some local deviation in antibiotic choices/durations). BSAC can connect NICE with our member who can provide case study if required. |
|  | Forte Medical Limited | Question 6 | Real world studies showing positive outcomes of midstream urine collection:  Primary Care GP surgery Wales: <https://forte-medical.co.uk/wp-content/uploads/2020/10/20191217_WALES_Peezy_UTI_Triage-Case-Study-V1.1_HighlightPark.pdf>  <https://girftpathology.blogspot.com/2019/03/use-of-peezy-device-to-try-to-improve.html>  <https://www.all4maternity.com/midwifery-back-to-basics-auditing-urinalysis-in-practice/>  <https://forte-medical.co.uk/2017-royal-surrey-nhs-county-hospital-midstream-urine-in-obstetrics-reduction-from-6-7-to-2-5/>  <https://forte-medical.co.uk/2013-pennine-hospital-nhs-peezy-at-ease-urology-clinic-mixed-growth-reduction-from-23-to-5/>  <https://forte-medical.co.uk/2017-barts-nhs-hospital-london-urine-sample-contamination-from-23-to-1-5-using-peezy-midstream/>  Two academic studies failed to meet their own protocols:   * Royal Free did not send all Peezy Midstream dipped samples to the lab for confirmation of quality; those that resulted in clear dipstick (ie those with the most pertinent evidence) were disposed of; * Oxford University with Nuffield did not ensure women had a full bladder before using Peezy Midstream, citing this as “unfeasable”, which is challenged by the need and success of pregnant patients to present for ultrasound with a full bladder. IFU for Peezy Midstream did not match the alternative start-stop-start method, putting the device at immediate disadvantage. Published paper and inventor’s commentary can be seen here: <https://bjgp.org/content/72/716/e225>   Whether or not a device is used for MIDSTREAM urine collection, its guideline requirement should ensure it is clearly included and repeated wherever urine sample is cited across LUTS guidelines. |
|  | Healthy.io | Question 6 | Yes.  Evaluation of the treatment of adult women under 65 years presenting with symptoms of uncomplicated urinary tract infections in community pharmacy using home-based urinalysis testing: available [here](https://emahsn.org.uk/images/Digital_UTI_Pathway_Evaluation_-_Final_v270720.pdf)  Evaluation of a community pharmacy-led test-and-treat service for women with uncomplicated lower urinary tract infection in England: available [here](https://academic.oup.com/jacamr/article/2/1/dlaa010/5802825)  A further evaluation of Healthy.io’s partnership with the NHS in Lincolnshire will be published soon – the pre-publication paper is available to the NICE committee. The evaluation analyses the impact of a community pharmacy-led test & treat service for non-pregnant women under 65 years presenting with symptoms of uncomplicated UTI and using smartphone-based urinalysis testing. |
|  | NHS England | Question 6 | * Not recently. * Also suggest strengthening this by encouraging local organisations to share these examples of best practice. It shouldn’t just be held in small pockets of information but would best be utilised by other local areas for spreading improvement actions. |
|  | NHS England South West Region | Question 6 | Response 1  QS 1. QS2. QS4. Are included in the NHS England Commissioning for Quality and Innovation (CQUIN): 2022/23 scheme for providers of acute care. Full details are published on the [NHS AMR Programme FutureNHS Workspace](https://future.nhs.uk/A_M_R)  Response 2  We have GP surgeries who have implemented a UTI pathway in conjunction with local pharmacies. I would be happy to share if required and on permission of the individual’s surgeries. |
|  | Bladder Health | Statement 1 | It is possible to have a UTI without the presence of nitrites in urine, dipsticks are also reputed to be unreliable. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4408713/> |
|  | British Association of Urological Surgeons | Statement 1 | There are problems associated with urine dipstick testing, particularly in early phases of uncomplicated urinary tract infections, when low bacterial counts are typical, both leukocyte esterase and nitrites may be undetectable. To insist that their must be a positive dipstick nitrite to diagnose UTI may lead to significant mis-diagnosis. There is ample evidence that symptoms alone are highly predictive. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Statement 1 | I disagree with the content of this statement – the current wording sounds like the diagnosis of UTI can only be made if positive nitrite on dipstick (this is not true e.g. false negative nitrite due to excessive hydration and true nitrite negative infections will be missed). I am concerned this statement will be misinterpreted so that women with a negative nitrite will not receive antibiotics despite classical UTI symptoms, this may lead to reattendance, complications such as persistent infection, recurrence, pyelonephritis etc, as well as prolonged symptoms. I think this statement may also be seen by patient groups as an over-reliance on inadequate tests (quite rightly) so is potentially contentious from that perspective too.  In the rationale, the wording re: ‘nitrite is an indirect measure of bacteria present in the urine’ is inaccurate; it is an indirect measure of certain bacteria present in high numbers in the urine (bacteria are always present in the urine). The text on page 7 regarding positive dipstick test for nitrite and it not excluding a UTI is accurate, however it is unlikely to be read routinely if only in the rationale, and the wording of QS1 does not capture the fact that a UTI can be diagnosed in the presence of a negative nitrite result. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Statement 1 | See point in Q1 comment re nitrite and dropping of leucocyte esterase and limited mention of true nitrite negative UTIs – there are a significant proportion of S. saprophyticus UTIs which will be nitrite negative (I agree enterococcal UTIs [also nitrite neg] are more often seen as contaminating, BUT do cause UTI). |
|  | Chronic Urinary Tract Infection Campaign (CUTIC) | Statement 1 | Statement one – not all pathogenic bacteria reduce nitrates to nitrites. Those patients with a bacterial infection that does not produce nitrites will have their infection missed by the dipstick test.  Not all bacteria responsible for UTIs contain nitrite reductase, the enzyme responsible for this conversion. Examples of Nitrite reducing bacteria including E-coli, Proteus and Klebsiella. But if a patient's infection is caused by Enterococcus or Pseudomonas, this enzyme conversion will not occur.  The assumption has been mistakenly made in committee that all uropathegenic infections are caused by nitrate reducing bacteria - they are not.  Negative dipstick analysis is common even though the patient has described UTI symptoms.  This can also be due to the following: • The dipsticks are calibrated to detect white blood cells counts of >10 5(100,000) bacteria per millilitre of urine or greater. For someone with a bacterial infections lower than this cut off range, the dipstick will report a false negative.  • Bacteria require a minimum of four hours to reduce the nitrate in urine to nitrites. Thus, the patient will need to hold the urine in their bladder for this length of time – those patients with frequency and urgency will struggle to do this.   • Various chemicals can also interfere with urine dipstick analysis. Some chemicals that may cause false-negative results include ascorbic acid (such as vitamin C) and oxalic acid (an organic compound found in many plants such as leafy greens, vegetables, fruits, cocoa, nuts and seeds).  • Biofilm or embedded bladder wall infections mean that the bacteria are embedded and hidden away from the urine, not floating in it. When you urinate, the bacteria will not transfer into the sample pot resulting in lack of detection on a dipstick.  One study notes that dipstick tests were just 56% sensitive to leukocyte esterase and 10% sensitive to nitrites in a study of patients with chronic LUTS without dysuria. Meta-analyses of the use of urinary dipsticks in adults and in children have been reported concluding that dipsticks cannot exclude infection reliably in most clinical settings.  References:  1. Gill K, Kang R, Sathiananthamoorthy S, Khasriya R, Malone-Lee J. A blinded observational cohort study of the microbiological ecology associated with pyuria and overactive bladder symptoms. Int Urogynecol J. 2018. Epub 2018/02/20. doi: 10.1007/s00192-018-3558-x. PubMed PMID: 29455238.  2. Price et al. The Clinical Urine Culture: Enhanced Techniques Improve Detection of Clinically Relevant Microorganisms. Journal of Clinical Microbiology. May 2016 (54) 5  3. Khasriya and Malone-Lee. The Inadequacy of Urinary Dipstick and Microscopy as Surrogate Markers of Urinary Tract Infection in Urological  Outpatients with Lower Urinary Tract Symptoms Without Acute Frequency and Dysuria. Journal of Urololgy. 2010 183(5): 1843–1847  4. Heytens et al. Women With Symptoms of a Urinary Tract Infection but a Negative Urine Culture: PCR-based quantification of Escherichia coli suggests infection in most cases. Clinical Microbiology and Infection. 2017  5. Swerkersson et al. Urinary Tract Infection in Infants: The significance of low bacterial count. Paediatric Nephrology 2016. 31:239–245  6.. Stamm et al. Diagnosis of Coliform Infection in Acutely Dysuric Women. New England Journal of Medicine. 1982 307(8): 463-468  We therefore recommend that signs and symptoms of infection should be equally weighted and clinicians should not only be guided by dipstick or culture results.  We are concerned that any delay in treatment may worsen infection (even leading to sepsis) given bacterial replication rates especially in the most common pathogen – e coli which is known to reproduce within 20 minutes. Again, patient signs and symptoms are key rather than reliance on return of inaccurate dipstick or microbiology analysis  Any delay in accurate diagnosis can lead to sepsis.  It is important to note, urine culture also has substantial limitations. For largely historical reasons, the ‘gold standard’ has long been defined as bacterial growth of a single organism at more than 105 CFU/ml. The 105 CFU/ml threshold was set out by Kass in 1957, and is widely criticized, as his patients’ urine samples were collected from only 74 women with acute kidney infections, with bacteria thriving in their urine. Since the late 1950’s there have been reports that such a threshold is not sufficiently sensitive to pick up all urinary infections, but the concerns of numerous scholars have been largely ignored by the medical community. In early reports, Stamm and colleagues have demonstrated that the threshold set out by Kass can only pick up 50% of urinary tract infections. They proposed a more sensitive diagnostic criterion of 102 CFU/ml, which has been supported by many other recent studies. Kass also believed that urine was sterile which has now been disproven. |
|  | Forte Medical Limited | Statement 1 | Requirement for guideline-specific MIDSTREAM urine should be included. As the Oxford Study does show, quality improves when proper instruction for start-stop-start is given and they acknowledge that outcomes of the Peezy Midstream/Whiz trial may have been different had no instructions been given, as is the norm for real-world practice. |
|  | NHS England | Statement 1 | * From a diagnostics perspective, we do not support this statement due to the following reasons: PHE guidance on diagnosis of UTI in non-pregnant women under 65 years does not recommend the use of a positive dipstick in order to diagnose UTI. A recent national workshop held by the AMR programme at NHSE ascertained that the majority of clinicians use the PHE guidance on UTI diagnosis. This change in practice would also have cost implications. Community pharmacy would need to consider purchasing of dipsticks, storage of dipsticks, disposal of waste generated and audit of these processes. * Needs a statement for the divergence from UKHSA – rationale and evidence base from SIGN. Concerned that in practice this will increase dipstick only based diagnosis. Consider a statement that dipsticks should not be used for recurrent UTI. * Need for an improved dipstick. Our patient engagement identified that they feel dipsticks are unreliable and the standard by which urine is analysed is flawed and outdated. Stakeholder discussions have also identified that Healthcare providers mainly follow NICE and UKHSA guidance around the patient criteria for using dipsticks. However, in some settings ,dipsticks have been abandoned all together (e.g. Taunton). Dipsticks are commonly used in children and pregnant women but there are patient groups they are totally avoided in such as the over 65s and patients with catheters. The point about patients themselves pushing to have urine samples tested with a dipstick when guidance showed otherwise was raised as another common instance when urine dipsticks are used. Stakeholders have also expressed concern over the availability of dipsticks over the counter and Amazon, saying they could falsely reassure people that they do not have a UTI when in fact they do. |
|  | NHS England South West Region | Statement 1 | Response 1  This statement is not supported. The wording in this new statement suggests that a urine dipstick test for nitrites is required for all women aged under 65Y who have 2 or more urinary symptoms. The current England guidance provided by the UKHSA [Urinary tract infection: diagnostic tools for primary care](https://www.gov.uk/government/publications/urinary-tract-infection-diagnosis) provides clear advice on when a urine dipstick for nitrites (and leucocytes and red blood cells) may inform diagnostic uncertainty. Diagnostic tests should not be used if there is no benefit to the clinical management of a UTI. Women with 2 or more key urinary symptoms should be supplied with appropriate antibiotics and a urine dip stick diagnostic test does not add diagnostic value to clinical care.  The [EAU guidelines](https://uroweb.org/guidelines/urological-infections/chapter/the-guideline) report use urine dipstick testing for diagnosis of acute uncomplicated cystitis has weak evidence, while a focused history of lower urinary tract symptoms (dysuria, frequency and urgency) has strong evidence.  Note the UKHSA and EAU guideline definition of key urinary symptoms differ from those published in the SIGN guidance and used in the proposed QS.  Note that urine dipstick testing is also poor at ruling out infection. This makes it difficult to rely on a nitrite positive dipstick test if a woman has clear symptoms or if a woman’s symptoms are severe, as this could lead to inappropriate delayed and unsafe care. Timely antibiotic use reduces the risk of deterioration to a complicated UTI and/or a blood stream infection.  Response 2  See Q5 response 2.  Response 3  “A positive nitrite test helps to rule in a UTI. However, a negative test does not exclude a UTI.’ This statement is not very beneficial. If a patient has 2 symptoms and no vaginal discharge, other causes have been ruled out then what is the benefit of the dipstick. PHE tool differs and this is confusing to decision makers, if local guidelines follow PHE indicator won’t be met. This indicator needs careful reconsideration.  Response 4  Unclear why Scottish rather than English UKHSA diagnostic guidance used to inform this standard. NICE treatment guidance references UKHSA diagnostic guidance. It is understood a review is underway. Sensible to await this? Processes in place embedded and have driven use of UKHSA guidance for several years. Is a switch in guidance and required process and behaviour change justified by evidence? A negative nitrite does not rule out a UTI. Consider appropriateness of urine sample (urine 4 hours in bladder), non nitrite producing organisms etc. Risk of undertreatment and escalation of symptoms in those with negative nitrite.  **What the quality statement means for different audiences Service providers (such as GP practices, hospitals, pharmacies)**  Response 1  Community providers of walk-in and minor injury services have been omitted. Out of hours providers have been omitted.  **Healthcare professionals (GPs, physician associates, hospital doctors and community pharmacists)**  Response 1  Nurses have been omitted.  Not all service providers are able to process urine samples for both urine dip stick analysis, and/or urine sample for culture. |
|  | UK Health Security Agency | Statement 1 | We are concerned about the implication for general practice, specifically the reliance on urine dipsticks for diagnosis and the limited number of symptoms used to define a UTI.   1. There is significant heterogeneity in the 2 metanalysis conducted in primary care settings cited for this recommendation in the SIGN guidance. This makes it difficult to understand the true predictive value of using a symptom or a combination of symptoms to detect a positive urine culture1 2. In both studies the authors cite this as a limitation. The third systematic review used focused on ER settings had multiple inconsistencies between the 3 studies included in the review and did not conduct a metanalysis because of the high heterogeneity3. None of these reviews/metanalysis were able to look in detail at various combinations of symptoms or how symptom severity influences diagnostic predictability. We do not feel that these papers supply enough evidence to exclude considering results specific to leukocytes or RBCs on a dipstick test and/or key signs and symptoms as part of a decision to provide antibiotics. There is evidence from other studies and recent metanalysis to say that combinations of symptoms can be significantly predictive of a positive culture or findings such as RBCs on a urine dipstick can be strongly predictive of patient management outcomes4 5.      1. Though urine dipsticks can be useful to detect a UTI, they are poor at ruling out infection4. This makes it difficult to rely on a nitrite positive dipstick test if a woman has clear symptoms or if a woman’s symptoms are severe, as this could lead to missing a significant number of infections that should be managed. 2. This quality standard states that *Two or more of the following symptoms: dysuria, frequency, urgency, visible haematuria or nocturia.[*[*SIGN’s guideline on management of suspected bacterial lower urinary tract infection in adult women*](https://www.sign.ac.uk/our-guidelines/management-of-suspected-bacterial-lower-urinary-tract-infection-in-adult-women/)*, recommendation 3.1.3, page 12].* While these are predictive symptoms, this statement has left out other symptoms, such as a fever, rigors, or flank pain, which could cause individuals to miss a more severe infection like pyelonephritis. This has also left out lower abdominal pain which has been shown as predictive in other studies and has been listed by SIGN guidance previously as a symptom to consider. Cloudy urine was also predictive of urinary tract infection in an English cohort 4. 3. For the following statement: *People who are incontinent and wear incontinence pads may need help to provide a urine sample for a dipstick test. For example, urine collection packs can be used to obtain a sample of urine. A GP or continence service should be able to arrange this.* This statement is coming from an equality standpoint for women under 65 years specifically. However, as many women who have issues with incontinence are in older adult groups including those in care homes, it would be good to remind that dipstick tests not being useful for this group. |
|  | UK Health Security Agency | Statement 1 | It is not helpful to have two competing documents. It will cause confusion. What is the additional benefit of reintroducing the dipstick? Why has this approach been taken? |
|  | UK Health Security Agency | Statement 1 | Difficult to collect data on urinary symptoms as no systematic processes in place. Current EPMA systems not capable of linking indication with antibiotic prescribed; at least for our Trust. Multiple systems would need to be interrogated; again time consuming, and not available for routine data download.  Note the sentence for secondary care ‘ If the dipstick test for nitrite is negative, they consider sending a urine specimen for culture to inform the diagnosis’; ED systems are not set up to bring people back. Currently not practical, and in most instances, introduces delay. Would be significant additional burden and not achieve given the current state of ED departments.  I have never heard of a urine collection pack or how to access??  SIGN mandates the urine dipstick in-order to diagnose UTI in women. Re-introduced reliance on dipstick which recent CQUIN work tried hard to eliminate. Why has this approach been taken?  PHE: 2 or 3 symptoms ; dipstick not needed; send culture only if AMR or pregnant; watch and wait with backup antibiotics or immediate script. 1 symptom; urine dipstick; if neg for nitrite; send for culture; consider immediate or back-up |
|  | British Association of Urological Surgeons | Statement 2 | Agreed, there is no value in dipstick testing in the context of an indwelling catheter. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Statement 2 | I agree with the content of this statement. In the rationale on page 8 and 9, I would suggest changing the wording from ‘Instead, signs and symptoms are assessed to diagnose UTIs with urine culture and sensitivity testing used to confirm the diagnosis and pathogen’ to ‘Instead, signs and symptoms are assessed to diagnose UTIs with urine culture and sensitivity used to *support* the diagnosis and pathogen’. A positive culture does not confirm a CAUTI, nor does a negative culture rule out a CAUTI, it can only support/guide diagnosis and treatment, not confirm it. |
|  | Forte Medical Limited | Statement 2 | Empirical prescribing is still recommended yet AMR guidelines recommend culture before prescribing (where possible and it is eminently possible when diagnosing a UTI).  <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/417032/Start_Smart_Then_Focus_FINAL.PDF>  “Antibiotics are not always needed for UTI”: <https://elearning.rcgp.org.uk/mod/book/view.php?id=12647&chapterid=475> |
|  | NHS England | Statement 2 | * We agree with this statement, from a prescribing (APMO) perspective. * Data collection for part a – feasible but labour intensive and requires resources and analytical skills to use a data for improvement at a system and provider level * Data collection not feasible for part b. A register of patients who are catheterised is complex due to the nature of how urinary catheters are supplied. Some services are subject to contracts, some via providers and some via FP10 provision. RightCare UTI has some data but it is not patient level data, this data set counts numbers of catheters per system as per the FP10 data. * Also, dipstick use for diagnosis is not consistently recorded. * Systems and providers cannot collect data therefore on who has a catheter and who had a dipstick used to diagnose UTI. |
|  | UK Health Security Agency | Statement 2 | Agree. What does the written protocol look like? Register not currently possible without significant additional resource to implement and oversee. Who will do this/ fund this? The numerator quality standard re investigated using dipstick again in secondary care mandates manual data searches / audits which are burdensome. Data such as ‘Antibiotic prescription rates for adults with indwelling urinary catheters’ needs to be automated . Not all EPMA systems can link indication to prescription. |
|  | British Association of Urological Surgeons | Statement 3 | Agreed, asymptomatic bacteriuria should not be routinely treated in **non-pregnant** women. It is however, unclear why men are excluded from this advice as asymptomatic bacteriuria in men also does not routinely need treating. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Statement 3 | I think a caveat to QS3 needs adding in the rationale – asymptomatic bacteriuria prior to certain urological procedures, in which case treatment may be advised by a specialist. |
|  | Forte Medical Limited | Statement 3 | Good. |
|  | NHS England | Statement 3 | * We agree with this statement from a prescribing (APMO) perspective. * See answer to question 3 above (i.e. standards 3, 4 and 5 are feasible in terms of data collection as local audit and data collection would be feasible at general practice, primary care network or provider level. However, unsure of the data analytical skills at the integrated care system level to co-ordinate and centralise data to drive improvement and strategic priorities within the integrated care systems) – primary care auditing feasible and is completed. Used locally to drive improvement, not as a system or network |
|  | NHS England South West Region | Statement 3 | Response 1  Investigation other technologies and innovations available such as Oestrogen, Uromune, Methiamine etc for menopausal aged women. Investing in programs such as UTI clinics for repeat UTI’s to enable patients to have access to specialist urologists for review, assessment and planning of holistic treatment preventing the over prescribing of antibiotics, BSI’s etc to improve patient outcomes  Response 2  Difficult to define in elderly if non specific symptoms of fever and new delirium/confusion. How to measure if alternative causes have been ruled out eg PINCH ME (UKHSA diagnostic guidance). |
|  | UK Health Security Agency | Statement 3 | Very difficult to work out from laboratory samples which represent asymptomatic bactiuruia; I am not sure how this information would be collected in reality. Again trawling through notes is burdensome, and not practical |
|  | British Association of Urological Surgeons | Statement 4 | While a shorter course of antibiotics does likely reduce adverse events and there is evidence that it can be clinically as effective as longer courses, there is no significant evidence to suggest that reduced courses in themselves reduce antimicrobial resistance. Antimicrobial stewardship generally requires us to reduce inappropriate usage of antibiotics not necessarily the length of course.  Indeed, it has been speculated that the rise in the incidence of recurrent UTI may be partly due to ‘inadequately treated’ uncomplicated UTI resulting in bacterial persistence. Alexander Fleming himself, when collecting the Nobel prize, famously warned that, “*There may be a danger, though, in underdosage…….. and by exposing his microbes to non-lethal quantities of the drug make them resistant.*”  As our understanding of the underlying causes behind recurrent UTI improves, usage of the shorter course may ultimately require re-assessment and for that reason, it may not be the best foundation for a ‘quality standard’. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Statement 4 | The wording ‘shortest effective course’ is ambiguous, does this mean that antibiotics are prescribed until there is full resolution of symptoms? If so, how would that be done in practice?  In the rationale, the wording ‘3-day courses of antimicrobials for treating uncomplicated lower UTI in non-pregnant women are as clinically effective as 5-10 day courses’ is not true for all antibiotics e.g. nitrofurantoin 3 days is *not* as effective as a 5 or 7 day course, however a 3 day course of ciprofloxacin or cotrimoxazole is as effective as a longer course – I appreciate this QS is based on the current NICE UTI recommendation to use 3-day course of nitrofurantoin first-line despite the evidence (extrapolated from evidence for other antibiotics and differs from other international guidelines) – however the wording in the rationale ‘are as clinically effective’ is inaccurate.  The shortest effective course is one that produces clinical resolution without excessive antibiotic exposure, and may not be 3-day for women and 7-days for men in all lower UTIs, so a QS that suggests auditing proportion of 3-day and 7-day is not actually measuring what the QS states. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Statement 4 | Treatment durations: a significant minority of women are not asymptomatic after 3 days of antibiotics and do end up with ongoing positive urine cultures/symptoms especially with nitrofurantoin. The statement could be reworded to allow HCWs to give more bespoke advice about when to stop antibiotics – however managing this may be difficult (how many days of antibiotics are prescribed vs taken and also differences in pharmacies with providing whole boxes of antibiotics vs the exact amount prescribed). |
|  | Chronic Urinary Tract Infection Campaign (CUTIC) | Statement 4 | We disagree. Although there are insufficient numbers of longitudinal studies that demonstrate the effectiveness of 3-day courses of antibiotics, the research that has been published is of poor quality and does not follow up patients for a sufficient length of time. Studies are needed that will follow patients after 1, 3, 6, 12 months of treatment to evaluate success of 3-day regimens.  Nitrofurantoin appears to lose efficacy if given for only 3-days. In an open-label, randomized controlled trial, Hooton et al. compared 3-day regimens of high-dose nitrofurantoin (100 mg four-times daily), trimethoprim/sulfamethoxazole, cefadroxil and amoxicillin; 6 weeks post-therapy, nitrofurantoin's clinical efficacy was only 61%. Similarly, a 2002 trial by Christiaens et al. comparing 3-days of nitrofurantoin with placebo in young women with symptoms of UTI and pyuria found clinical cure rates of 70% versus 42%, respectively, 7 days after the start of therapy.  We would also note that the ESPAUR report (2016) states that 86% of CCGs have resistance rates greater than 25%, highlighting that trimethoprim can no longer be advised as the first-line empiric antibiotic treatment for UTIs. This would highlight an issue with short course prescription usage and failure of laboratory testing or retesting for an appropriate antibiotic and confirmation of infection.  Further, published clinical research from 2018 notes that longer term antibiotic treatment is appropriate for patients who report failure on initial antibiotic treatment.  This clinical research noted no antibiotic resistance.  References:  Antimicrobial stewardship: prescribing antibiotics Key therapeutic topic [KTT9] Published date: January 2015 Last updated: January 2017 National Institute for Health and Care Excellence.  Hooton TM , Winter C, Tiu Fet al.  . Randomized comparative trial and cost analysis of 3-day antimicrobial regimens for treatment of acute cystitis in women. JAMA 1995; 273: 41–5.  Christiaens TC , De Meyere M, Verschraegen Get al.  . Randomised controlled trial of nitrofurantoin versus placebo in the treatment of uncomplicated urinary tract infection in adult women. Br J Gen Pract 2002; 52: 729–34.  Swamy S, Barcella W, De Iorio M, Gill K, Kupelian A, Khasriya R, et al. Recalcitrant chronic bladder pain and recurrent cystitis but negative urinalysis – What should we do? International urogynecology journal. 2018  In addition, there is a significant discrepancy in antibiotic prescription length for men and women.  In Women, prescription length is noted at 3-days whereas for men is noted at 7-day initial treatment. Whilst infection rates for men are lower, antibiotic failure rates of 3-day courses of between 25-30% are found in treatment of patients. An assumption is made that these courses work for 100% of patients and there is no consideration for those who fail and what should be done next by way of treatment.  Foxman B. The epidemiology of urinary tract infection. Nature reviews Urology. 2010;7. doi: 10.1038/nrurol.2010.190.  Gupta K, Hooton TM, Naber KG, Wullt B, Colgan R, Miller LG, et al. International clinical practice guidelines for the treatment of acute uncomplicated cystitis and pyelonephritis in women: A 2010 update by the Infectious Diseases Society of America and the European Society for Microbiology and Infectious Diseases. Clinical infectious diseases : an official publication of the Infectious Diseases Society of America. 2011;52(5):e103-20. doi: 10.1093/cid/ciq257. PubMed PMID: 21292654.  We are concerned that this quality standard implies that a single causative pathogen is responsible for uncomplicated UTI. Infections are now multi-pathogenic. Even with a positive initial urine sample, if the infection is not cleared based on culture results, consideration by the GP must include not only the same pathogen but other causative low growth pathogens.  Tenke P, Koves B, Nagy K, Hultgren SJ, Mendling W, Wullt B, et al. Update on biofilm infections in the urinary tract. World JUrol. 2011.  Blango MG, Mulvey MA. Persistence of uropathogenic Escherichia coli in the face of multiple antibiotics. AntimicrobAgents Chemother. 2010;54(5):1855-63.  Hoiby N, Bjarnsholt T, Givskov M, Molin S, Ciofu O. Antibiotic resistance of bacterial biofilms. Int J Antimicrob Agents. 2010;35(4):322-32. doi: 10.1016/j.ijantimicag.2009.12.011. PubMed PMID: 20149602.  Anderson GG, Dodson KW, Hooton TM, Hultgren SJ. Intracellular bacterial communities of uropathogenic Escherichia coli in urinary tract pathogenesis. Trends Microbiol. 2004;12(9):424-30.  Anderson GG, Palermo JJ, Schilling JD, Roth R, Heuser J, Hultgren SJ. Intracellular bacterial biofilm-like pods in urinary tract infections. Science. 2003;301(5629):105-7. Epub 2003/07/05. doi: 10.1126/science.1084550. PubMed PMID: 12843396.  Reid G. Biofilms in infectious disease and on medical devices. IntJAntimicrobAgents. 1999;11(3-4):223-6.  Costerton JW, Cheng KJ, Geesey GG, Ladd TI, Nickel JC, Dasgupta M, et al. Bacterial biofilms in nature and disease. AnnuRevMicrobiol. 1987;41:435-64.  Empirical evidence, from the group of patients we support with chronic infection, all found that 3-day regimens of antibiotics failed to clear their infection adequately. They were then given several short courses of antibiotics and broader spectrum agents. This initial treatment failure led to long-term, chronic infection. This treatment approach also encourages resistance and intra cellular colonisation. |
|  | Forte Medical Limited | Statement 4 | Question over validity of 3-day prescribing (I developed Sepsis after a GP prescribed ineffective 3-day Nitrofurantoin followed by stronger dose of same medicine to which my bacteria had already proven resistant. Immediate prescribing should be based on confirmation of problem bacteria: “It may be concluded that 3-day courses of nitrofurantoin and trimethoprim are less effective than 5- and 7-day courses in the treatment of uncomplicated urinary tract infections in women.” <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1884592/>  “Knowing local resistance levels is key to effective and cost-effective empirical prescribing. Recent estimates of trimethoprim resistance rates are close to 50%, in which case a single 3 g dose of fosfomycin is likely to be the most cost-effective treatment option.” <https://bjgpopen.org/content/1/3/bjgpopen17X101097> |
|  | GSK | Statement 4 | GSK agrees with the quality statement that for the treatment of uncomplicated lower urinary tract infection (UTI), patients should be prescribed the shortest effective course of antibiotics. However, we hope NICE will also be cognisant that as new antibiotics are developed for UTI their PK/PD properties and clinical trial data may support dosing regimens of 5 days to be effective in curing UTI. The quality statement should recognise that as new antibiotics are developed the 3 day catch all figure for shortest treatment duration maybe not appropriate for these new antibiotics. |
|  | NHS England | Statement 4 | * We agree with this statement, however, the message needs clarity as men have been shown to have been prescribed shorter course lengths than recommended that could lead to treatment failure and complications. We would prefer the statement to say: Women with uncomplicated lower UTI are prescribed a 3-day course length of antibiotics and men are prescribed a 7-day course length. * See answer to question 3 above (i.e. standards 3, 4 and 5 are feasible in terms of data collection as local audit and data collection would be feasible at general practice, primary care network or provider level. However, unsure of the data analytical skills at the integrated care system level to co-ordinate and centralise data to drive improvement and strategic priorities within the integrated care systems) – primary care auditing feasible and is completed. Used locally to drive improvement, not as a system or network. |
|  | NHS England South West Region | Statement 4 | Response 1  Note that NICE [Urinary tract infection (lower): antimicrobial prescribing](https://www.nice.org.uk/guidance/ng109) guideline content recommendation for second line treatment of LUTI includes a single dose of Fosfomycin. To avoid confusion, it would be helpful to consider placing the proposed statement in the context of duration of antibiotic for first line treatment only, and consider rephrasing to reflect this.  Response 2  Not resorting to antibiotic prescribing immediately but appropriate clinical review and assessment to identify if other technologies/innovations could be of help Oestrogen, Uromune, Mehtiamine etc.  Response 3  See Q2 response 4 |
|  | Royal College of General Practitioners | Statement 4 | Statement 4 – it is difficult to know the shortest length of treatment unless looking back retrospectively. Is that 3d, 5d or 7days? If shortened treatment doesn’t work what are the implications for longer term antimicrobial resistance. |
|  | UK Health Security Agency | Statement 4 | Agree. Shortest effective course of antibiotics but doesn’t identify this cohort; ‘People who are at higher risk of treatment failure or resistant infection need longer courses of treatment’. |
|  | British Association of Urological Surgeons | Statement 5 | Agreed. The rise in incidence of recurrent UTI and problems relating to its management is already requiring greater involvement of urological services therefore in many ways this reflects what is happening already. This standard ***partly*** links in with the existing guidance found in “Urological cancers - recognition and referral” CKS document where it states “Consider non-urgent referral for bladder cancer in people aged 60 years and over with recurrent or persistent unexplained urinary tract infection.” |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Statement 5 | The QS could be read as though all recurrent upper UTI and recurrent lower UTI should be referred for investigation. Reading the rationale, it seems as though it is supposed to read as though recurrent upper UTI should be referred, and recurrent lower UTI should only be referred when the cause is unknown. If this is the case, can the wording be clearer?  The vast majority of young women with recurrent UTI will have no underlying cause that is apparent in primary care (and according to the QS should then be referred), but there is no national referral/investigation pathway for this, so it is difficult to see how this QS would work in practice – who should they be referred to, what investigations (if any) should be done. Recommending referral without national guidance/pathway for this may be problematic and have significant resource implications for out-patient services e.g. increase in out-patient urology clinics, imaging (USS, CT KUB etc), cystoscopies. Is this feasible even with increased resources, are urology services equipped to be able to provide this especially in the absence of established pathways/guidelines?  Many young women with recurrent UTI are managed by GPs currently with local guidelines in place for this. |
|  | British Society for Antimicrobial Chemotherapy (BSAC) | Statement 5 | I think this is over referring – many women with recurrent UTIs can be managed by GPs with appropriate advice as suggested on current NICE guideline. My experience of urologists is “ring microbiology” when they have such patients so would need to be a more bespoke guideline produced to manage recurrent UTI and then decide which subset would benefit from referral and what specific conditions/treatable abnormalities are being sought. Definitions need to be before discussing the management, not afterwards |
|  | Chronic Urinary Tract Infection Campaign (CUTIC) | Statement 5 | We have concerns regarding the statement defining infection as usually being caused by bacteria from the gastrointestinal tract implying that the normal urinary tract is “sterile”.  There is evidence that there are now strong signals of the existence of a ‘‘core’’ urinary microbiome for the human urinary tract, particularly emerging with ageing. This has implications not just for acute infection but for recurrence of infection with the same pathogens. We would ask that the guidelines reflect that infection causation is not solely by gastrointestinal pathogens.  A case control study examining the bladder microbiome Natasha Curtiss, Aswini Balachandran, Louise Krska, Claire Peppiatt-Wildman, Scott Wildman, Jonathan Ducketta 2017  Does the Urinary Microbiome Play a Role in Urgency Urinary Incontinence and Its Severity  Lisa Karstens , Mark Asquith, Sean Davin, Patrick Stauffer, Damien Fair W.Thomas Gregory, JamesT.Rosenbaum, Shannon K.McWeeney and Rahel Nardos 2016   Gram-Positive Uropathogens, Polymicrobial Urinary Tract Infection, and the Emerging Microbiota of the Urinary Tract: Kimberly A. Kline and Amanda L. Lewis 2016   Microbial metagenome of urinary tract infection Ahmed Moustafa, Harinder Singh, Weizhong Li, Kelvin J. Moncera, Manolito G. Torralba, Yanbao Yu, Oriol Manuel, William Biggs, J. Craig Venter, Karen E. Nelson, Rembert Pieper, Amalio Telenti 2017   The Urinary Microbiome and Its Contribution to LUTS: Marcus J. Drake, Nicola Morris, Apostolos Apostolidis, Mohammad S. Rahnama and Julian R. Marchesi 2015 |
|  | Chronic Urinary Tract Infection Campaign (CUTIC) | Statement 5 | Statement 5: Adults with a recurrent upper urinary tract infection (UTI) or recurrent lower UTI where the cause is unknown are referred for further investigation. **[new 2022]**  We agree. A time frame for referral should be stipulated and referrals should be to national specialist centres. Patients with persistent symptoms or infections refractory to treatment need to be referred speedily. In addition, given the incidence of ESBL infections and other antibiotic resistant infections, establishing specialist centres for antibiotic resistant infections should be a major health priority. There also needs to be a national database code for patients with on-going symptoms in order that these can be identified and measured. |
|  | Forte Medical Limited | Statement 5 | Recurrent UTI management requires MIDSTREAM URINE, <https://patient.info/doctor/recurrent-urinary-tract-infection>  Yet PHE guidelines do not (again) specify quality and specificity of urine specimen: <https://www.nice.org.uk/guidance/ng112/chapter/Recommendations#treatment-for-women-with-recurrent-uti-who-are-not-pregnant>  Clarity and parity of instruction needs to be guaranteed throughout all documents relating to urine collection;  equivocal, unclear or conflicting instructions will lead to national variation of diagnosis, treatment and outcomes. |
|  | NHS England | Statement 5 | * We agree with this statement, but it does not mention relapsed UTIs, which is different to recurrent UTIs. Suggest this is covered in this question or added as a specific separate question. * See answer to question 3 above (i.e. standards 3, 4 and 5 are feasible in terms of data collection as local audit and data collection would be feasible at general practice, primary care network or provider level. However, unsure of the data analytical skills at the integrated care system level to co-ordinate and centralise data to drive improvement and strategic priorities within the integrated care systems). |
|  | NHS England South West Region | Statement 5 | Response 1  Agree with this statement and suggest include wording to reflect the NICE recommendation of the need to refer adults with recurrent LUTI where the cause is unknow for investigation for cancer. people with suspected cancer in line with the NICE guideline on [suspected cancer: recognition and referral](https://www.nice.org.uk/guidance/ng12).  Response 2  Investing in programs such as UTI clinics for repeat UTI’s to enable patients to have access to specialist urologists for review, assessment and planning of holistic treatment preventing the over prescribing of antibiotics, BSI’s etc to improve patient outcomes.  Response 3  Requires clarification of appropriate referral recommendations. |
|  | Purple Orchid Health Ltd | Statement 5 | UTI and MENOPAUSE: Published clinical trial for a **non-hormonal** vaginal moisturiser Hyalofemme showed it to be as effective as 0.1% oestrogen cream in treating the symptoms of vaginal atrophy (Chen et al. 2013 J Sex Med) Dusio et al, 2011 (Immunology and cell biology) showed LMW-HA activated TLR 2 and TLR4 induced the secretion of antimicrobial peptide B-defensin2. This product may provide a safer alternative to vaginal oestrogen for menopausal women in helping prevent UTI. The ongoing HATPIN clinical trial at Freeman Hospital “Hyaluronate for the treatment and prevention of recurrent urinary tract infections in women suffering atrophic vaginitis” should be monitored for its results. |
|  | Royal College of General Practitioners | Statement 5 | Statement 5 – on recurrent UTI. Many people can have problems over 5 years or more. How often are we anticipating reinvestigation is needed? |
|  | UK Health Security Agency | Statement 5 | Referral may be challenging ; is there the national capacity to absorb the referrals in a timely fashion given current NHS contexts and priorities. Is there sufficient expertise once referred to investigate and manage, without resorting to prolonged antibiotic courses?; Do we have any idea of burden nationally?  At a Trust level we often see repeat admissions with complicated UTI and bacteraemias….there does not seem to be a comprehensive system in place to investigate, with the aim of preventing re-admission. The approach in secondary care is very reactionary. Very few get referrals, and if they do time-lines are too long. |
|  | Royal College of Nursing | No comments | No comments. |
|  | Royal College of Pathologists | Comments received after consultation closed | *[Due to pressure and workload in hospitals, The Royal College of Pathologists was not able to submit comments until after consultation had closed and committee had met to amend the draft quality standard.]*  We support the removal of using a dipstick to diagnose catheter associated UTI and the short duration of antibiotics in uncomplicated UTI. We also support the referral for further investigation in cases of recurrent UTI where the cause is unknown. |

Note: Comments received in the course of consultations carried out by NICE are published in the interests of openness and transparency, and to promote understanding of how quality standards are developed. The comments are published as a record of the submissions that NICE has received, and are not endorsed by NICE, its staff or its advisory committees.

## Registered stakeholders who submitted comments at consultation

* Bladder Health
* British Association of Urological Surgeons
* British Geriatrics Society
* British Society for Antimicrobial Chemotherapy
* C.R Bard Inc
* Chronic Urinary Tract Infection Campaign
* Forte Medical Limited
* GSK
* Healthy.io
* NHS England
* NHS England South West Region
* Pelvic Obstetric and Gynaecological Physiotherapy
* Purple Orchid Health Ltd
* Royal College of General Practitioners
* Royal College of Nursing
* UK Health Security Agency

Note: The Royal College of Pathologists submitted comments after consultation had ended. Due to pressure and workload in hospitals, comments could not be submitted before consultation had ended and committee had met to amend the draft quality standard.