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Daytime Urinary Incontinence in Children

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Acknowledgements

Davina Richardson RGN/RSCN, BSc (Hons), Project Lead, Children's Specialist Nurse, Bladder & Bowel UK and RCN Bladder and Bowel Forum Committee Member

Anna Hancock BSc (Hons) RN, NMP, Project Co-Lead, Queens Nurse, Deputy Chair Bladder and Bowel Forum, Lead Nurse for Bladder and Bowel Care, University Hospital Coventry and Warwickshire (Community)

Janice Reid, RCN Bladder and Bowel Forum Chair, Lecturer in Nursing, Pathway lead for Bladder and Bowel Dysfunction programme Ulster University

Alex Darragh, Clinical Lead, Children's Bladder and Bowel Team for Coventry and Warwickshire

Emma Cumberland, Student Specialist Community Public Health Nurse (SCPHN) (School Nurse); Best Start, Community Health and Wellbeing Service, Cornwall Council

Linda Gale, Senior Urology/Continence Clinical Nurse Specialist, St George's University Hospitals NHS Foundation

Nosheen Chaouad, Senior Urology/ Continence Clinical Nurse Specialist, St George's University Hospitals NHS Foundation Trust

Rhonda Reily, Children's Continence Nurse Specialist, Western Health and Social Care Trust

Kim Baker, Senior Nurse Children's Community Team, Cwm Taf Morgannwg University Health Board

RCN Bladder and Bowel Forum Committee

Rebekah Overend, RCN Professional Lead, Children and Young People Nursing

Kim Ball, RCN Professional Lead, Primary Care Nursing

Margaret Ojo, RCN Project Co-ordinator

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Foreword

Daytime urinary incontinence and associated lower urinary tract symptoms are issues that affect a significant number of children and young people. Despite their prevalence, health professionals – particularly nurses working in specialist community bladder and bowel services – have long lacked a single, comprehensive, evidence-based resource to guide practice across the UK. This absence of consolidated national guidance has contributed to variations in assessment, inconsistency in treatment pathways, and unnecessary referrals to secondary and tertiary care, creating avoidable challenges for families and healthcare services alike.

This guidance represents an important step in addressing that gap. Developed in response to the expressed needs of children's specialist bladder and bowel nurses, it brings together current evidence, expert clinical insight, and practical recommendations to support high quality, consistent care. Its scope reflects the realities of practice, encompassing children and young people up to 18 years of age. By focusing on functional daytime lower urinary tract symptoms, the document aims not only to guide effective management but also to promote early, appropriate intervention, reducing distress for children and families and improving long term outcomes.

This guidance is welcomed as a timely and valuable resource for the nursing profession. It champions best practice, supports clinical decision making, and reinforces the essential role of specialist nurses in providing holistic, evidence informed care. Ultimately, its purpose is simple but vital: to ensure that every child and young person experiencing daytime bladder difficulties receives the right support, at the right time, from confident and knowledgeable practitioners.

We are thankful for the work done by members of the RCN Bladder and Bowel Forum Committee. We are also very appreciative of the expertise of other specialists from around the UK and key members of the RCN who have proposed additions and changes.

Janice Reid
Chair, RCN Bladder and Bowel Forum Steering Committee

1. Introduction

Functional daytime urinary incontinence and associated bladder symptoms are common in children and young people. However, unlike other prevalent functional bladder and bowel conditions, no single source of evidence-based guidance has been available from a national organisation within the UK.

This guidance has been produced in response to requests from children's specialist bladder and bowel nurses. It aims to fill that gap by providing relevant comprehensive information, including the current evidence-base and recommendations for assessment and treatment.

Scope/purpose

This guidance provides clinical guidelines and promotes best practice for nurses working within specialist community children's bladder and bowel services for those children with daytime lower urinary tract symptoms. It also aims to reduce variability of care for children and young people and unnecessary referrals to secondary care.

Inclusion/exclusion

This guidance is based on current evidence for the management of children and young people up to the age of 18 years old, who have typical anatomy and physiology of the urinary tract, ie, lower urinary tract symptoms (LUTS) and urinary incontinence in the absence of anatomical or physiological abnormalities that are often referred to as functional daytime bladder issues. Children and young people with additional needs and disabilities who have typical bladder development and LUTS are included in this guidance.

It specifically excludes children who have been diagnosed with a congenital anomaly affecting the urinary tract, those who have a neuropathic bladder and those who have acute, chronic or recurrent urinary tract infection(s) (UTI). It does include those children with lower urinary tract dysfunction following UTI.

Key points

- Functional daytime lower urinary tract symptoms are common in children and young people, including those with additional needs.
- This is a clinical guidance document for specialist nurses.
- The document aims to promote consistency of care and reduce unnecessary referrals to secondary and tertiary care.

2. Prevalence of daytime urinary incontinence (DUI)

Prevalence rates for DUI vary depending on definitions used and the population studied. Underreporting is common due to stigma, embarrassment (Saarikoski et al., 2018), and limited understanding of normal bladder development (Chiozza et al., 1998, cited in Melling and Goyal, 2020).

The Avon Longitudinal Study of Parents and Children (ALSPAC) (Swithinbank et al., 2010) looked at data from 5,290 children and young people whose families responded fully to questions asked about DUI. This study defined DUI as:

- **infrequent**: wetting less than twice per week during waking hours
- **frequent**: wetting at least twice per week during waking hours.

Prevalence of daytime urinary incontinence

	4.5 years	5.5 years	6.5 years	7. 5 years	9.5 years
Infrequent wetting	13.2%	7.5%	9.2%	6.4%	4.1%
Frequent wetting	1.8%	1.4%	0.9%	0.9%	0.5%

(Swithinbank et al., 2010)

Among children with frequent wetting, 70-85% reported urgency, compared to less than 40% of those with infrequent wetting. Frequent wetting was also less likely to resolve spontaneously.

Gender differences

The prevalence of DUI in girls has been reported as slightly higher than boys, with girls also more likely to experience DUI alone. Boys have co-occurring nocturnal enuresis and, to a lesser extent, faecal incontinence more often (Swithinbank et al., 2010). A more recent study found no gender differences (Salo et al., 2021).

Age-related trends

A Swedish study (Salo et al., 2021) that matches clinical experience, reported an inverse relationship between age and DUI in a healthy Swedish cohort, with it affecting:

- 10% of 4–7-year-olds
- 9% of 8–12-year-olds
- 6% of 13–15-year-olds.

Associated symptoms

Among those with DUI in an Australian study, larger accidents (eg, puddles on the floor) occurred only in children who wet more than once daily and there were strong associations between DUI and:

- holding postures (90%)
- urgency (75%)
- increased frequency (51%)
- nocturnal enuresis (38%)
- soiling (24%).

(Sureshkumar et al., 2009)

DUI in children with additional needs

DUI is more prevalent in children with neurodevelopmental conditions:

- 13.3-55% in children with autism
- 39% in children with intellectual disabilities
- 24.8% of children with DUI have ADHD (von Gontard et al., 2021).

Key points on the prevalence of DUI

- Definition and reporting: prevalence varies depending on how DUI is defined and the population studied. Rates may be underestimated due to under-reporting, often linked to stigma or lack of awareness.
- Gender differences: DUI appears slightly more common in girls. However, boys are more likely to experience associated conditions such as nocturnal enuresis and faecal incontinence (soiling).
- Associated symptoms: DUI is frequently linked with urgency, increased urinary frequency, and holding postures.
- Age trends: prevalence generally decreases with age.
- Symptom persistence: children who experience DUI more than twice a week are less likely to achieve spontaneous resolution.
- Additional needs: DUI is more common in children with neurodevelopmental or intellectual disabilities, including autism and ADHD.

3. Impact of daytime urinary incontinence

Daytime urinary incontinence can have a profound and lasting impact on children and their families, affecting emotional wellbeing, social development and family dynamics.

Emotional and social effects

Detrusor overactivity, a common cause of DUI, has been described as 'socially harmful' (Kopac, 2024). Children often describe their experiences as 'embarrassing and shameful' (Saarikoski et al., 2018), with the emotional burden increasing as they become more socially aware. Feelings of frustration, abnormality, shame, and disgust are common, particularly in older children and adolescents. Many hide their symptoms due to fear of being treated differently or bullied, leading to social withdrawal and isolation (Whale, 2016).

Parental experience

Parents report increased stress as children reach school age (five to six years old), due to the unpredictability of symptoms and societal expectations of continence. Feelings of anxiety, guilt and failure are common when parental efforts to resolve incontinence symptoms are unsuccessful (Linde et al., 2021).

Family and social life

DUI can affect family dynamics, strain the parent–child relationship, and limit social opportunities for both the child and family (Whale, 2016).

Concerns about bullying and school support

Parents express concern about bullying as children grow older and seek coping strategies for themselves and their child. A Dutch study highlighted a lack of support from schools, parental concerns about bullying as their child got older, and parents seeking coping strategies for themselves and their child (Linde, 2021). Anecdotal evidence is that children in the UK have similar experiences in educational establishments, despite the publication of a guidance document in 2019 and subsequent updates ***Managing Bladder and Bowel Issues in Nurseries, Schools and Colleges*** (Bladder & Bowel UK, 2025).

Adolescent vulnerability

Teenagers are particularly vulnerable due to the importance of peer relationships and the need for social acceptance (Blakemore, 2018). Young people with DUI often experience stigma, low self-esteem, and avoid activities to prevent embarrassment (Whale, 2016). In a recent study one participant described the condition as “not life-threatening, but life-ruining.”

Long-term consequences

DUI at the age of 14 has been associated with increased depressive symptoms, peer victimisation, reduced self-image, and negative perceptions of school (Grzeda et al., 2016). Childhood lower urinary tract symptoms are also linked to a higher risk of bladder issues in adulthood (Kuh et al., 1999 cited in Neveus and Sillen, 2012; Akashi and Tomita, 2014). While successful treatment may not reduce this risk, unresolved psychological impacts are unlikely to improve without proactive support (Joinson et al., 2006).

Key points on the impact of DUI

- Widespread impact: clinical experience shows that DUI and its associated symptoms have a pervasive and insidious impact on children, young people and their families.
- Age-related vulnerability: the negative effects of DUI increase as children grow older and become more socially aware, with teenagers being particularly vulnerable due to the importance of peer acceptance.
- Emotional and social stigma
- Children often feel embarrassed and ashamed.
- Teenagers may experience frustration, a sense of abnormality, shame, and even disgust with their bodies.
- Parents frequently report anxiety, guilt and a sense of failure, along with fears about their child being bullied.

4. Risk factors for daytime urinary incontinence

Although several risk factors have been identified, their relative importance remains unclear. Current evidence and clinical experience suggest the following contributing factors.

Family history

A strong association exists with a family history of DUI, overactive bladder or dysfunctional voiding.

Socioeconomic and educational factors

Lower educational levels and socioeconomic status may increase risk. (Nieuwhof-Leppink et al., 2019).

School environment

Limited access to toilets, poor toilet conditions, lack of privacy, and fear of peer behaviour can lead to internalised negative toileting habits (Haines Lyon et al., 2024). These factors are reinforced by reports from children and young people in clinical settings.

Toileting behaviours

Not all girls sit fully on the toilet seat to urinate, potentially contributing to dysfunctional voiding and incomplete bladder emptying (Zemer et al., 2023).

Developmental and psychological factors

- Children with delayed motor and communication skills, or those with difficult temperament traits (eg, low adaptability, negative mood), are at increased risk of DUI at school age.
- Maternal depression or anxiety during early childhood (around 21 months) is linked to a higher likelihood of DUI, even in children who had previously achieved dryness. (Joinson et al., 2008)

Associated conditions

DUI often co-occurs with other bladder and bowel symptoms, including nocturnal enuresis, urgency and frequency, withholding postures and constipation, with or without faecal incontinence (Sureshkumar et al., 2009). Children with these conditions should be screened for LUTS (lower urinary tract symptoms) and DUI.

Key points for risk factors

Unclear significance: while several risk factors have been identified, their relative importance remains uncertain.

Toileting behaviours: detrimental toileting habits – often shaped by negative experiences in school toilets – are a risk factor.

Associated symptoms: children with DUI are more likely to also experience:

- nocturnal enuresis
- urinary frequency and urgency
- withholding behaviours
- constipation, with or without faecal incontinence.

5. Prevention of daytime urinary incontinence

While there is limited direct evidence on preventing DUI and LUTS, several strategies are widely accepted as beneficial in promoting healthy bladder function and reducing risk.

Healthy bladder habits

Bladder training (urotherapy) is the first-line treatment for lower urinary tract dysfunction and may also support prevention. A key component is regular (approximately two hourly) water-based fluid intake, tailored to the child's age, size, environment and previous intake.

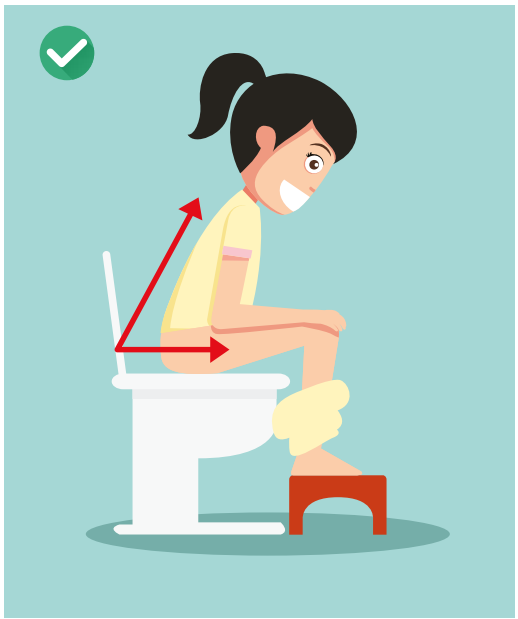
Recommended fluid intake by age and gender

Age	Sex	Total drinks per day
7 – 12 months	Both male and female	600 – 900mls
1 – 3 years	Both male and female	900 – 1000mls
4 – 8 years	Both male and female	1200 – 1400mls
9 – 13 years	Female	1200 – 2100mls
	Males	1400 – 2300mls
Over 14 years	Female	1400 – 2500mls
	Male	2100 – 3200mls

Adapted from NICE, 2010

Toilet positioning

Correct toilet posture supports pelvic floor relaxation and full bladder emptying.



Children should:

- sit with feet flat, supported and slightly apart
- have knees level with or above hips
- keep their back straight and slightly leaning forward (Mulders et al., 2011)
- many children will need a toilet seat reducer and step for their feet to attain the correct positioning on the toilet.

Constipation prevention

Constipation, which has a pooled prevalence of 9.5% (Koppen et al., 2018), is a known contributor to bladder dysfunction. Prevention includes:

- a balanced diet with plenty of fruit and vegetables, wholegrain cereals, but not unprocessed bran
- sufficient fluid intake
- proper toilet posture (see diagram on **page 14**)
- early use of laxatives if constipation develops.

Introducing toileting skills early in development may help prevent bladder issues later in childhood (Shoham et al., 2021).

School toilet environment

School toilets are a known risk factor for DUI (Shoham et al., 2021). Barriers include:

- restricted access by staff
- poor toilet conditions
- lack of privacy
- fear of bullying, resulting in toilet avoidance.

Addressing these issues is essential. Involving students in evaluating and improving toilet facilities can be effective, but needs to be supported by school staff (Haines Lyon et al., 2024).

Key points for the prevention of DUI

- Limited evidence: there is currently little direct evidence on the prevention of LUTS and DUI in children.
- Healthy habits: encouraging correct toilet positioning, regular fluid intake, scheduled voiding, and early treatment of constipation may be preventative.
- Early toileting skills: introducing toileting skills early in childhood may reduce the risk of bladder and bowel issues later on.
- School environment: improving school toilet facilities and access may support healthy toileting behaviours and contribute to prevention.

6. Impact of delayed toilet training

Achieving daytime continence is important for independence in children, but the age at which children gain bladder control has increased in recent decades, which may explain why the International Children's Continence Society define lower urinary tract symptoms (LUTS) from age five, although children may have functional symptoms at a younger age (Austin et al., 2016). In the UK, most children achieve daytime bladder control between the ages of three and four years (Blum et al., 2004).

When to start toilet training

Evidence on the best approach and timing for toilet training is limited, however initiating toilet training before 24 months may significantly reduce the risk of lower urinary tract dysfunction (Li et al., 2020).

Delayed training may expose children to more stressors, affecting bladder health (Joinson et al., 2009) and prolonged nappy use may extend detrusor-sphincter discoordination, potentially negatively impacting bladder function later in childhood (Duong et al., 2010).

Use of disposable products

There is no clear evidence of a direct link between disposable nappy use and bladder control. However, the outcome of a systematic review has led to suspicions that the increased use may be associated with rising rates of LUTS in children (Brienbjerg et al., 2021).

Key points for toileting skill development and continence

- Continence and independence: attainment of continence is important for independence in children.
- Early skill introduction: introducing the skills needed for toilet training before 24 months of age reduces the likelihood of lower urinary tract dysfunction.
- Nappy use: prolonged use of nappies may negatively affect bladder health by delaying the development of co-ordinated bladder control.

7. Daytime urinary incontinence in children with disabilities

Children with disabilities are more likely to experience DUI than their typically developing peers, and symptoms often persist into adolescence and adulthood (von Gontard et al., 2016).

Prevalence and severity

DUI is most common in children with profound intellectual disabilities. Those with an IQ between 50–70 are more likely to achieve continence than those with lower cognitive functioning (von Gontard et al., 2016). Prevalence increases as IQ reduces (von Gontard et al., 2021).

Contributing factors

There is not yet firm evidence of causes of increased prevalence of DUI in children with disabilities (von Gontard et al., 2016). However, potential contributors can include:

- suboptimal fluid intake
- poor voiding habits
- prolonged use of continence products
- constipation and urinary tract infections
- diagnostic overshadowing
- limited access to specialist assessment and intervention.

Bladder function differences

Children with intellectual disabilities often have incomplete bladder emptying, interrupted urinary flow, and smaller bladder capacities (Yang et al., 2010, cited in von Gontard et al., 2021).

Equity in care

Children with disabilities must receive the same level of specialist assessment and care as their peers, with appropriate adaptations. Failure to do so may breach the Equality Act 2010 and the United Nations Convention on the Rights of the Child.

Neurodevelopmental conditions

Children with ADHD and autism spectrum disorder (ASD) may require additional support during treatment due to unique behavioural and sensory needs but continence is still achievable for most of these children and young people (von Gontard et al., 2021).

Key points on DUI in children with disabilities

- Higher prevalence and persistence: children with disabilities are more likely to experience DUI than their typically developing peers, with symptoms often continuing into adolescence and adulthood. This may be partly due to diagnostic overshadowing and limited specialist assessment and intervention.
- Bladder function differences: children with intellectual disabilities are more likely to have incomplete bladder emptying, interrupted urinary flow, and smaller bladder capacities.
- Equity in care: all children, including those with disabilities, should receive individualised, specialist assessment and treatment.

8. What is normal? Understanding bladder function in children

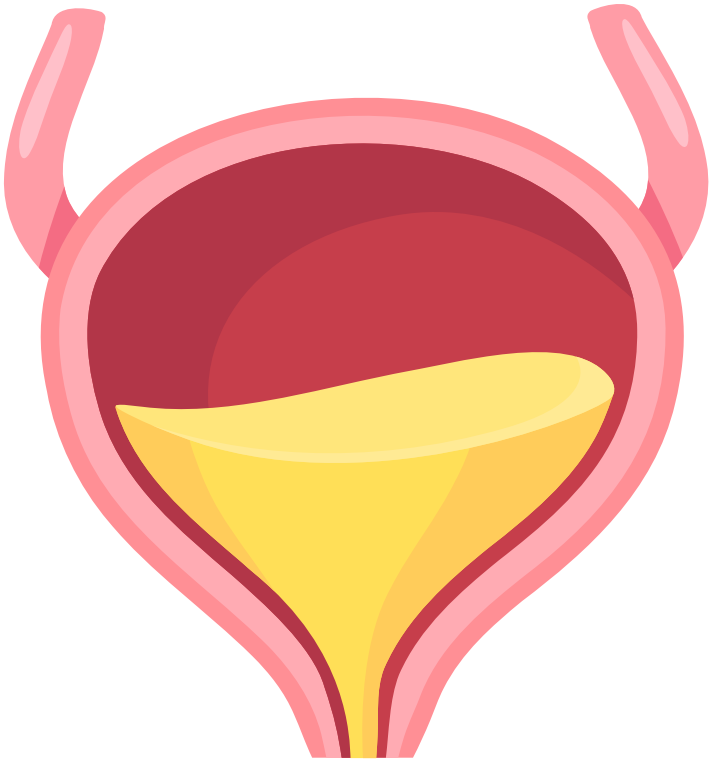
To assess and manage daytime urinary incontinence, it is essential to understand what constitutes typical patterns of toileting behaviour and bladder control in children. This provides a baseline for identifying deviations and planning appropriate interventions.

Normal urine storage and voiding

During bladder filling the detrusor muscle (the bladder wall muscle) must be relaxed and the sphincter and urethra are contracted. Voiding requires co-ordinated contraction of the detrusor and relaxation of the sphincter and urethra (Clothier, 2018).

Normal voiding frequency

From the age of four, or earlier if toilet training is completed, children typically void four to seven times per day. This can vary depending on fluid intake, activity level and environmental factors (Tegul et al., 2023).



Expected bladder capacity

Bladder capacity increases with age. The following formula is used to estimate expected balder capacity (EBC) in children aged four-12 years:

EBC (ml) = 30 × (age in years + 1)

Maximum voided volume is the largest volume recorded in a 24-hour period (excluding the first morning void). It is considered:

- **Small** if <65% of EBC
- **Large** if >150% of EBC (Austin et al., 2016)

Age (years)	Expected bladder capacity (ml)
4	150
5	180
6	210
7	240
8	270
9	300
10	330
11	360
12	390

Normal fluid intake

Fluid intake directly affects voiding frequency and bladder health. Many children with LUTS or DUI restrict fluids or have them restricted by family. They may have access to fluids limited during school hours. Reduced fluid intake can worsen symptoms.

- **Low fluid intake** leads to concentrated urine, which may irritate the bladder and cause or exacerbate detrusor overactivity.
- **Caffeinated and fizzy drinks** (eg, tea, coffee, cola, energy drinks) should be avoided as they can irritate the bladder lining.
- **Blackcurrant and some fruit squashes with additives** may also cause irritation in some children, based on clinical experience.

NICE (2010) provides age-based fluid intake recommendations (see table on **page 14**). Children who are obese, physically active, or in hot environments may require more than the recommended amounts.

9. Daytime lower urinary tract conditions (LUTS)

A holistic nursing assessment for DUI aims to identify the type, frequency and impact of lower urinary tract symptoms on the child and their family. The symptoms together with a frequency volume chart and bowel chart will assist towards diagnosing the cause of the problem and potential appropriate interventions.

Understanding the potential causes of DUI is essential for explaining them to the child and family so that an effective, individualised care plan can be agreed with them.

While conditions are described separately (**see appendix one**), clinical presentations often overlap, particularly between overactive bladder and dysfunctional voiding (Deshpande et al., 2011).

Assessment of LUTS in children

A comprehensive, non-invasive assessment is essential for all children presenting with LUTS and/or daytime urinary incontinence (DUI) (Rogers, 2013; Tekgul et al., 2020; von Gontard et al., 2016b). It should not be assumed that LUTS or DUI in a child who has a disability, or additional developmental, learning or sensory needs is due to those additional needs. The assessment should consider:

- the child's age and developmental stage
- physical and behavioural symptoms
- comorbid conditions (eg, constipation, neurodevelopmental disorders)
- the emotional and social impact on the child and their family
- any safeguarding or child protection concerns.

Building rapport and communication

- Use child-friendly language appropriate to the child's age, development and cultural background (Nieuwhof-Leppink et al., 2021).
- Ensure the child's voice is valued equally to the parent's voice (von Gontard et al., 2016b).
- Where possible, offer continuity of care with the same clinician to build trust. This is especially important due to the sensitive nature of the condition (Whale et al., 2017).

Key elements of assessment

1. Structured history including:

- obstetric and family history
- medical history (past and present)
- developmental, learning and sensory needs
- behavioural concerns

- wetting history: onset, triggers, any patterns (eg, timing of wetting, whether wetting before or after voiding, volume of wetting) and impact of stressors
- voiding: frequency, urgency, holding behaviours, any straining to initiate voiding, any hesitancy, flow description (weak, strong, stop-start)
- bowel habits – assessment for evidence of constipation is essential: frequency, stool type (Bristol chart), soiling, abdominal or anal pain, withholding, straining, painful bowel motions, bleeding with stooling.

2. Urinalysis:

- to exclude diabetes or urinary tract infection.

3. Bladder and bowel diaries provide objective data and a baseline for treatment:

- bladder diary: two–three days of fluid intake, voiding frequency/volume, wetting episodes
- night-time wetting: record for seven nights
- bowel diary: seven-14 days of stool type, size, frequency, soiling, blood or mucous with stools.

4. Bladder scan:

- to assess post-void residual volume (if available).

5. Quality of life questionnaires are useful for understanding the broader impact of symptoms:

- the International Children's Continence Society (ICCS) suggests several tools, selection depends on setting and population (Chase et al., 2018).

6. Physical examination (not essential at initial presentation unless red flags are present):

- abdomen, lumbosacral spine, external genitalia, perineum and lower limb reflexes
- in community settings, children who are not responding to treatment as expected should be referred to a paediatrician for examination, if this cannot be undertaken in a nurse-led community clinic.

7. Safeguarding:

- consider child maltreatment (see box on **page 24** for potential indicators of abuse).
- if there are safeguarding concerns seek supervision and follow local safeguarding policies and procedures.

Consider child maltreatment if:

- a child has secondary day or night-time wetting that persists despite adequate assessment and management, unless there is a medical explanation or clearly identified stressful situation that is not part of maltreatment
- a child is reported to be deliberately wetting
- a child is soiling (has faecal incontinence) in the absence of constipation or appears to be deliberately smearing of faeces
- the possibility of sexual abuse must be considered in cases of genitourinary trauma
- consider abuse where there is dysuria, chronic pain in the lower abdomen, urinary retention, daytime and nighttime incontinence or LUTS symptoms such as nocturia, urinary frequency, painful voiding or urgency.

10. Clinical red flags and when to refer on

At the community level, teams should:

- recognise when symptoms are not improving or suggest more complex pathology
- know when to refer to secondary care for further investigation.

Initial assessment

All children and young people referred to generic/universal (Level 1) services for lower urinary tract symptoms (LUTS) or daytime urinary incontinence (DUI) must receive an initial assessment by a competent health care professional. Management should follow local clinical pathways and relevant national guidance.

Red flags – immediate referral required

If any of the following are identified at referral, initial assessment, or during review, refer immediately to secondary care or a regional urology service:

- excessive thirst or weight loss may suggest diabetes insipidus or diabetes mellitus. Requires same-day referral to paediatric diabetes team or secondary care
- neurological signs in spine/lower limbs means an urgent specialist referral is needed
- recurrent urinary tract infections (UTIs) should be managed in line with NICE guidance (NICE, 2022)
- fever and pain on urination could signal a possible UTI or other urinary tract issue
- blood in urine requires investigation to rule out serious causes
- continuous incontinence/dribbling (no dry intervals) may indicate anatomical abnormalities.

Symptoms requiring consideration for referral

Refer to paediatric urology or secondary care, according to local pathways, if the following are present:

- infrequent urination – less than three times a day with adequate fluid intake, especially with post-void residual or UTI history
- straining to void – effort needed to start or maintain urination
- weak urinary stream
- hesitancy – difficulty initiating urination despite urge
- intermittency – start-stop pattern during urination
- dysuria – painful urination
- urinary retention – inability to void with full bladder or significant post-void residual apparent on scan
- spraying/splitting of stream may suggest mechanical obstruction (eg, meatal stenosis)
- bladder, urethral, or genital pain may require specialist assessment (Austin et al., 2016).

11. Comorbidities

Bladder and bowel dysfunction

- The bladder and bowel share significant neural pathways.
- Constipation and faecal incontinence are present in one-third of children with DUI (Nieuwhof-Leppink et al., 2019).
- Rectal dilation from faecal loading can compress the bladder.
- Toileting behaviours (eg, withholding) affect both bladder and bowel function.
- Treating constipation may improve DUI (Jessen et al., 2022), but not all bladder symptoms resolve with bowel treatment alone.

12. Associated conditions and considerations

Enuresis (bedwetting)

- Common in children with DUI:
  - 70-80% of boys
  - 40-60% of girls with frequent (twice a week or more) DUI also have enuresis (Swithinbank et al., 2010).

Screening and treatment for enuresis should be offered.

Urinary tract infections (UTIs)

- DUI may be linked to recurrent UTIs (Sureshkumar et al., 2009).
- Recurrent UTIs can lead to renal damage and vesicoureteral reflux (VUR).
- Treating LUT dysfunction may resolve VUR (Kopač, 2024).

Developmental and psychological factors

- 6.8% of children with DUI and 3% of dry children have developmental delay (Joinson et al., 2006).
- Children with DUI have higher rates of:
  - separation anxiety
  - general anxiety and sadness or depression
  - parent reported attention/activity problems
  - parent reported oppositional and conduct behaviours
  - voiding postponement, which may indicate oppositional disorders and familial dysfunction.
- Children with DUI are more likely to have psychological issues than children who are dry (von Gontard et al., 2015).
- Adolescents with DUI are more likely to develop mental health issues (eg, anxiety, depression) by age 18 (Gordon et al., 2023).
- Stressful life events and separation anxiety may trigger new-onset DUI, especially in primary school-aged girls (Warne et al., 2024).

Physical factors

- Joint hypermobility may affect pelvic floor support in girls.
- Obesity may contribute to DUI, though evidence is mixed.

(Nieuwhof-Leppink et al., 2019).

Safeguarding concerns

- New-onset DUI or LUTS may be associated with physical or sexual abuse (Kopac, 2024).
- Clinicians must be alert to signs and follow local and national safeguarding protocols.

Key clinical actions

- Assess for constipation in all children with LUTS/DUI and treat proactively.
- Screen for enuresis and offer treatment if present.
- Check for UTIs and refer if recurrent or complicated.
- Evaluate psychological wellbeing; refer to CAMHS or psychological services, if needed.
- Consider safeguarding concerns in cases of new-onset LUTS/DUI.

13. Role of investigations

Purpose of investigations

Investigations help the clinician:

- understand how the urinary system is functioning
- confirm a safe urological system
- monitor treatment effectiveness.

When to consider advanced investigations

Advanced investigations should be considered if:

- structural abnormalities or neurological issues (eg, tethered cord) are suspected
- red flags are present (see **Section 10**)
- symptoms are not responding to treatment and adherence to treatment has been checked
- there is a history of UTIs.

14. Investigations for daytime urinary incontinence

Tier 1 and 2: community-level assessments

Investigation	Purpose	Details
1. Frequency-volume chart (bladder diary)	Assess fluid intake, voiding patterns, wetting, bladder capacity and impact of bladder irritants (eg, caffeine/fizzy drinks).	Completed over two full non-school days, when child in care of parents. Records fluid intake (type and amount), urine volumes and wetting episodes (small/medium/large).
2. Bowel diary	Identify and manage constipation.	Completed over at least seven consecutive days. Records time, type (Bristol stool chart), size, location of stools; any pain, blood/mucus and laxative use.
3. Urinalysis and urine culture	Rule out underlying medical conditions.	Screen for UTI, diabetes mellitus/insipidus, renal disease. Send culture if UTI suspected.
4. Post-void bladder scan	Assess bladder emptying.	Supports interpretation of bladder diary; identifies residual urine.

Tier 3: secondary or tertiary care investigations

Investigation	Purpose	Indications
1. Renal ultrasound	Evaluate kidneys, bladder and urinary tract.	Suspected structural abnormalities, incomplete emptying.
2. Uroflowmetry	Measure urine flow rate and pattern. Combines with post void bladder scan to assess voiding function.	Refractory symptoms, recurrent UTIs, suspected neurological/anatomical issues.
3. Cystometry/video urodynamics	Visualises bladder and urinary tract during storage and voiding. Assess bladder pressures.	Suspected vesicoureteric reflux, outflow obstruction, detrusor pressures. Used in anatomical abnormalities, spinal cord disorders, stress incontinence, incomplete emptying, refractory symptoms.
4. Electromyography	Measures pelvic floor muscle activity.	Often paired with uroflowmetry to assess pelvic floor and co-ordination during voiding.

15. Treatment of DUI and LUTS in children and young people

1. Provision of information

Written and verbal information should be provided in accessible formats for both children and families. This promotes understanding of LUTS and DUI, and treatment options. Additionally, it promotes adherence and cooperation, which is essential for successful outcomes.

Information should be:

- age-appropriate
- culturally sensitive
- available in languages other than English, if needed.

2. Constipation management

As outlined, constipation should be excluded in the initial assessment. If present, it should be treated according to *NICE Guidance on Constipation* (2010b).

3. Urotherapy

Urotherapy is the first line treatment for LUTS and DUI (Deshpande et al., 2012; Hussong et al., 2021; Ikeda et al., 2020; von Gontard and Kuwertz-Broking, 2019) and can lead to symptom resolution in 40–78% of cases (Mulders et al., 2011; Chang et al., 2015; Hussong et al., 2021). Older children and girls may respond better to this line of treatment than younger children and boys (Mulders et al., 2011).

Time and consistency are key and families should be reassured about gradual progress.

Standard urotherapy includes:

- education on normal bladder function and the child's specific issues
- correct toileting posture:
  - sit with bottom well supported, feet flat on a firm surface and slightly apart, knees above hips (see image on **page 14**)
  - relaxed diaphragmatic breathing (Nieuwhof-Leppink et al., 2021), blowing or whistling to prevent abdominal and pelvic muscle contraction during voiding (Nieuwhof-Leppink et al., 2019)
  - boys may be asked to sit to void
  - consider sensory needs.

Adequate intake of water-based fluids. Children and families should be advised to:

- adjust fluid intake according to age, size and activity levels (**see table on page 32**). Children who are obese, very active or in hot environments will need more than indicated

- avoid caffeine and fizzy drinks
- spread drinks evenly throughout the day, with a drink approximately every two hours
- half of intake should be during school hours
- last drink should be about one hour before bed.

Recommended fluid intake

Age	Sex	Total drinks per day
7 – 12 months	Both male and female	600 – 900mls
1 – 3 years	Both male and female	900 – 1000mls
4 – 8 years	Both male and female	1200 – 1400mls
9 – 13 years	Female	1200 – 2100mls
	Male	1400 – 2300mls
Over 14 years	Female	1400 – 2500mls
	Male	2100 – 3200mls

Adapted from NICE (2010) and NG 11

Voiding habits

- Urinate every two-three hours or at least seven times a day (Chang et al., 2017).
- Avoid holding urine.
- Consider using timers or watches to encourage regular voiding (Nieuwhof-Leppink et al., 2021; Jessen et al., 2022).
- Double voiding for children with post-void residuals: instruct child to count for a few seconds, stand up and sit down again and then relax and wait for a second stream of urine (Nieuwhof-Leppink et al., 2021).

Monitoring

Use frequency-volume charts to track progress (Chang et al., 2017) and to serve as feedback of progress to the child and family (Nieuwhof-Leppink et al., 2021).

Engagement

Encourage children to use incentive charts and take an active role in their treatment.

4. School involvement

Schools should be provided with sufficient information so that they can support:

- access to fluids
- regular toilet breaks.

School nursing services can advocate for treatment adherence during school hours.

When to consider medication

Medication should be considered if urotherapy alone is insufficient or symptoms significantly affect quality of life. The use of medication increases the likelihood of resolving the symptoms (Jessen et al., 2022; Hyuga et al., 2023). Approximately 60% of children and young people respond to medication when combined with standard urotherapy (von Gontard and Kuwertz-Broking, 2019).

Weigh the benefits versus side effects of medication and involve the child or young person and their family in decision making about treatment (see contraindications and side effects below).

Prescriber responsibilities

- Check for contraindications and drug interactions.
- Educate families on:
  - how the medication works
  - dosage and administration
  - side effects and when to seek help.

Contraindications for anticholinergics

Avoid in children with:

- glaucoma
- gastrointestinal obstruction or atony
- myasthenia gravis
- paralytic ileus
- severe colitis
- urinary retention
- toxic megacolon
- bladder outflow obstruction.

Monitoring for urinary retention

- Perform post-void bladder scan and 48-hour diary:
  - before starting medication
  - within two to six weeks after initiation of medication
  - within two to six weeks after dose changes
  - or sooner if child, young person or family report any concerns about symptoms suggestive of retention, for example, feeling of incomplete emptying, voiding less than four times a day or smaller voided volumes than previously recorded.
- Stop treatment immediately if no voiding for 12 hours.

- If retention confirmed or there is evidence of residual bladder volumes after starting medication, discontinue medication. Consider introducing an anticholinergic with a lower-risk side effect profile after resumption of complete bladder emptying.

Common side effects

Start low, titrate gradually to reduce likelihood of side effects which can include (BNFC, 2026):

- dry mouth
- flushed face
- constipation
- blurred vision
- drowsiness
- sweating (heatstroke risk)
- difficulty concentrating.

Review schedule

- First review: within four weeks from commencement of treatment.
- Ongoing: every six-12 weeks.
- Use bladder diary before each review.
- Most children respond within six months, some take longer (BNFC, 2026).

16. Medication options

For further information and dosages consult the **British National Formulary for Children**.

Drug	Age (years)	Notes
Oxybutynin (licensed in children)	2+	Tablets (crushable), modified release (6+ years), syrup (special order – expensive).
Tolterodine (unlicensed in children)	2+	Lower side-effect profile than oxybutynin; tablets or MR capsules.
Solifenacin (licensed for neurogenic detrusor overactivity in children)	2+	Off-label for DUI; oral suspension (avoid food/drink after).
Trospium chloride	12+	For frequency, urgency and associated urinary incontinence; immediate release tablets. Must be taken on an empty stomach.

Biofeedback therapies

Biofeedback uses electrodes and computerised feedback to help children learn how to control, strengthen, and relax their pelvic floor muscles. It aims to improve both bladder storage and emptying (Great Ormond Street Hospital for Children, 2018).

Biofeedback:

- is likely to be most effective in children aged aged seven and over (Fernandez et al., 2017)
- may reduce symptoms of DUI when used alongside standard urotherapy and, in some cases, medication (Jessen et al., 2022)
- has reported success rates ranging from 59–80% (Jacobsen et al., 2021).

Key considerations

- Many children benefit more from learning to relax the pelvic floor rather than strengthen it.
- Assessment is essential to determine the appropriate focus of therapy. Access to trained professionals is limited. Physiotherapists are typically the experts in pelvic floor assessment; however few are trained to work with paediatric patients.
- Geographical access is a barrier, as services are often located in large children's hospitals, which may not be local to where the family reside.

Neurostimulation

Neurostimulation has shown promise as a non-pharmacological treatment for DUI in children (Dos Santos et al., 2017), offering a safe alternative to medications like anticholinergics as there are fewer side effects.

17. Evidence summary

Studies have found positive effects when neurostimulation was delivered in clinical settings (Fernandez et al., 2017).

Sacral TENS (transcutaneous electrical nerve stimulation), has been suggested to:

- be as effective as anticholinergics
- have fewer side effects
- improve quality of life in children (Dos Santos et al., 2017)
- reduce wetting incidents and may be used in combination with anticholinergics (Pederson et al., 2021)
- there are currently no agreed regimes for use of TENS in children with LUTS or DUI (Pederson et al., 2021).

Cautions

Further research is needed to clarify best practices and long-term outcomes.

18. Conclusions

LUTS and DUI has an impact on the lives of children and families, causing physical, psychological, social and educational difficulties, as well as some practical adjustments. Identifying and treating the underlying causes (such as constipation or a urinary tract infection) through effective treatments and management is imperative to alleviating the physical symptoms and supporting the improvement of mental health and general wellbeing.

The aim of treatment is to promote more effective bladder control, reduce frequency of wetting and increase bladder capacity as well as reduce any negative feelings relating to bladder function (von Gontard and Kuwertz-Broking, 2019).

Although usually effective, treatment of daytime urinary incontinence in children and young people may be complex and time consuming. Families need reassurance, and support (Nieuwhof-Leppink et al., 2019). The approach and treatment will vary according to age, the underlying cause, the child and family's individual needs and preferences. They will require regular follow-up with an appropriately trained health care professional to monitor progress, assess adherence and amend treatment plans as appropriate.

19. Appendices

Appendix 1 – Summary table: daytime LUT conditions and treatment options

While conditions are described separately in the table below, clinical presentations often overlap particularly between overactive bladder and dysfunctional voiding (Deshpande et al., 2012).

Symptoms/observations	Condition	Description	Treatment
Urgency, frequency, urge incontinence, nocturia	**Overactive bladder (OAB)**	Likely due to detrusor overactivity. Diagnosis is clinical unless confirmed by cystometry.	Treatment of any constipation. Urotherapy: regular water-based drinks and toilet visits (timer watch may be helpful). Anticholinergic medication, if no concerns about urinary retention: oxybutynin is usually first line, tolterodine and solifenacin are alternatives. Warn family about potential side effects. Monitor for constipation. Titrate dose gradually. Review with **frequency volume chart** prior to dose increases and consider post-void scans prior to commencing and after dose increase (Maternik et al., 2015). Consider gradual weaning when symptoms resolve. Consider referral on if symptoms refractory – some tertiary centres use mirabegron as third or fourth line options (Melling and Goyal, 2020).

Symptoms/observations	Condition	Description	Treatment
Holding postures to prevent voiding, urgency, low frequency, fluid restriction, DUI when bladder full	**Voiding postponement**	May be linked to psychological comorbidity or behavioural disturbance such as oppositional defiant disorder.	Assess for and treat any associated constipation. Urotherapy: regular water-based drinks and a schedule for toilet visits with voiding every two-three hours (von Gontard et al., 2016b). Regular frequency/volume charts to confirm effectiveness of treatment. Post-void residual scanning to confirm complete emptying (Maternik et al., 2015).
Interrupted urine flow	**Dysfunctional voiding**	Habitual contraction or incomplete relaxation of the urethral sphincter and/or pelvic floor during voiding. May show a staccato pattern, with or without interrupted flow on EMG.	Urotherapy: regular water-based drinks and toilet visits. Good toilet position to encourage pelvic floor relaxation. Biofeedback for refractory symptoms, if available (Maternik et al., 2015).
DUI shortly after voiding in girls	**Urethrovaginal reflux**	Girls who experience frequent DUI after voiding, with no LUTS or bedwetting. Urine trapped in the introitus due to voiding with legs together. May be associated with labial adhesions.	If labial adhesions refer for treatment. Instruct girls to: 1. spread labia prior to voiding 2. sit with thighs well apart (abducted – remove leggings or tights and underwear) 3. lean forwards while voiding (Maternik et al., 2015) 4. press small pad of toilet paper against perineum and press up and forwards after voiding (Prabhuswamy et al., 2023).
DUI associated with exertion (eg, coughing, sneezing)	**Stress incontinence**	Involuntary leakage with increased intra-abdominal pressure. No detrusor contraction (this can only be confirmed with urodynamics).	Exclude or treat any constipation (Maternik et al., 2015). Urotherapy: regular water-based drinks and toilet visits (Maternik et al., 2015). Adolescents may benefit from pelvic floor muscle assessment and exercises from an appropriately trained nurse or physiotherapist (Maternik et al., 2015).

Symptoms/observations	Condition	Description	Treatment
Frequent voiding (at least hourly), low volumes, no incontinence	**Extraordinary daytime only urinary frequency**	Small-volume voids passed more than hourly in toilet-trained children. Incontinence is rare, nocturia is absent. Exclude diabetes insipidus, polydipsia, and UTI.	Usually, self-limiting. Fluid advice including avoiding caffeine and acidic drinks. Consider anticholinergics (Maternik et al., 2015).
Total bladder emptying during or after laughter	**Giggle incontinence**	Rare. Normal bladder function except during laughter. NB, Children with OAB may also experience DUI with laughter.	Urotherapy: regular water-based drinks and toilet visits (Gonzalex-Maldonado and Garcia-Merida, 2024). Biofeedback including teaching rapid contraction of pelvic floor muscles on laughter (Maternik et al., 2015). Consider treating for OAB with anticholinergics as this may coexist with giggle incontinence (Deshpande et al., 2012). Methylphenidate is used in some specialist tertiary centres (Maternik et al., 2015; Gonzalex-Maldonado and Garcia-Merida, 2024).
Straining to initiate, continue or complete voiding, low frequency with adequate hydration or frequency due to incomplete emptying	**Underactive bladder**	Weak detrusor contraction requiring increased intra-abdominal pressure to void. Decreased voiding frequency and bladder volume <150% of expected capacity.	Urotherapy: regular water-based drinks and toilet visits (Deshpande et al., 2012). Good toilet position to encourage pelvic floor muscle relaxation. Double voiding if there are post void residuals. Referral for consideration of intermittent catheterisation (Deshpande et al., 2012).
Slow urine flow	**Bladder outlet obstruction**	Mechanical or functional obstruction with increased detrusor pressure but continued low urinary flow rate. Confirmed by pressure-flow studies.	Refer to paediatric urology for further investigation and possible treatment.

Appendix 2 – Frequency volume chart (bladder diary)

Name:	
Date of birth:	NHS number:

	Day one			Day two		
Date:						
Time	**Drinks**	**Urine**	**Bowels**	**Drinks**	**Urine**	**Bowels**
6am						
7am						
8am						
9am						
10am						
11am						
12pm						
1pm						
2pm						
3pm						
4pm						
5pm						
6pm						
7pm						
8pm						
9pm						
10pm						
11pm						
12am						
1am						
2am						
3am						
4am						
5am						

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Appendix 3 – Bowel chart

Name:	
Date of birth:	NHS number:

Date	Time	Stool type (Bristol stool chart)	Size of stool (S/M/L)	Where stool passed (toilet, pants, other)	Any blood or mucus (Y/N)	Any pain with stools (Y/N)	Laxatives taken

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References

Akashi S and Tomita K (2014) The impact of a history of childhood nocturnal enuresis on adult nocturia and urgency, *Acta Paediatrica*, 103(9), pp. e410–e415.

Austin P F, Bauer S B, Bower W, Chase J, Franco I, Hoebeke P, Rittig S, Walle J V, von Gontard A, Wright A, Yang S S and Nevéus T (2016) The standardization of terminology of lower urinary tract function in children and adolescents: Update report from the standardization committee of the International Children's Continence Society, *Neurourology and Urodynamics*, 35(4), pp. 471–481.

Bladder & Bowel UK (no date) *Resources for bladder and bowel problems in children*. Available at: **bbuk.org.uk/children-young-people/resources-for-children** (Accessed 9 February 2026).

Bladder & Bowel UK (2025) *Managing Bladder and Bowel Issues in Nurseries, Schools and Colleges: Guidance for school leaders, proprietors, governors, staff and health and social care professionals*. Available at: **bbuk.org.uk/wp-content/uploads/2025/07/Managing-Continence-Problems-in-Schools-July-2025.pdf** (Accessed 31 January 2026).

Blakemore S J (2018) *Inventing Ourselves: The Secret Life of the Teenage Brain*. London: Doubleday.

Blum N J, Taubman B and Nemeth N (2004) Why is toilet training occurring at older ages? A study of factors associated with later training, *The Journal of Pediatrics*, 145(1), pp. 107–111.

BNFC (2026) *BNF for Children (BNFC)*. Available at: **bnfc.nice.org.uk** (Accessed 16 February 2026).

Breinbjerg A, Rittig S and Kamperis K (2021) Does the development and use of modern disposable diapers affect bladder control? A systematic review, *Journal of Pediatric Urology*, 17(4), pp. 463–471.

Chang S-J, Van Laecke E, Bauer S B, von Gontard A, Bagli D, Bower W F, Renson C, Kawauchi A and Yang S S-D (2017) Treatment of daytime urinary incontinence: A standardization document from the International Children's Continence Society, *Neurourology and Urodynamics*, 36(1), pp. 43–50.

Chase J, Bower W, Gibb S, Schaeffer A and von Gontard A (2018) Diagnostic scores, questionnaires, quality of life, and outcome measures in pediatric continence: A review of available tools from the International Children's Continence Society, *Journal of Pediatric Urology*, 14(2), pp. 98–107.

Clothier J (2018) Use of urodynamics to diagnose continence problems in children, *Nursing Times*, 114(10). Available at: **ovid.com/journals/nrtm/fulltext/00006203-201810000-00047~use-of-urodynamics-to-diagnose-continence-problems-in** (Accessed 9 February 2026).

Deshpande A V, Craig J C, Smith G H and Caldwell P H (2012) Management of daytime urinary incontinence and lower urinary tract symptoms in children, *Journal of Paediatrics and Child Health*, 48(2), pp. E44–E52.

Dos Santos J, Lopes R and Koyle M (2017) Bladder and bowel dysfunction in children: An update on the diagnosis and treatment of a common, but underdiagnosed pediatric problem, *Canadian Urological Association Journal*, 11(1–2), pp. 64–72.

Duong T H, Jansson U-B, Holmdahl G, Sillén U and Hellstrom A-L (2010) Development of bladder control in the first year of life in children who are potty trained early, *Journal of Pediatric Urology*, 6(5), pp. 501–505.

Fernandez N, Chua M, Ming J, Lorenzo A, Braga L, Iglesias Lopes R, Silangcruz J M, Zu'bi F and Dos Santos J (2017) Neurostimulation Therapy for Non-neurogenic Overactive Bladder in Children: A Meta-analysis – Urology, *Urology*, 110, pp. 201–207.

von Gontard A, Hussong J, Yang S, Chase J, Franco I and Wright A (2021) Neurodevelopmental disorders and incontinence in children and adolescents: Attention-deficit/hyperactivity disorder, autism spectrum disorder, and intellectual disability – A consensus document of the International Children's Continence Society, *Neurourology and Urodynamics*, 41(1), pp. 102–114.

von Gontard A, de Jong T P V M, Rantell A, Nieuwhof-Leppink A, Badawi J K and Cardozo L (2016) Do we manage incontinence in children and adults with special needs adequately? ICI-RS 2014, *Neurourology and Urodynamics*, 35(2), pp. 304–306.

von Gontard A and Kuwertz-Broking E (2019) The Diagnosis and Treatment of Enuresis and Functional Daytime Urinary Incontinence, *Deutsches Ärzteblatt*, 116, pp. 279–285.

von Gontard A, Niemczyk J, Wagner C and Equit M (2016b) Voiding postponement in children – a systematic review, *European Child & Adolescent Psychiatry*, 25(8), pp. 809–820.

von Gontard A, Niemczyk J, Weber M and Equit M (2015) Specific behavioral comorbidity in a large sample of children with functional incontinence: Report of 1,001 cases, *Neurourology and Urodynamics*, 34(8), pp. 763–768.

González-Maldonado A A and García-Mérida M (2024) Giggle incontinence: a scoping review, *Pediatric Research*, 95(7), pp. 1720–1725.

Gordon K, Warne N, Heron J, von Gontard A and Joinson C (2023) Continence Problems and Mental Health in Adolescents from a UK Cohort, *European Urology*, 84(5), pp. 463–470.

Great Ormond Street Hospital for Children (2018) *Biofeedback training, GOSH Hospital site*. Available at: **gosh.nhs.uk/conditions-and-treatments/procedures-and-treatments/biofeedback-training** (Accessed 16 February 2026).

Grzeda M T, Heron J, von Gontard A and Joinson C (2017) Effects of urinary incontinence on psychosocial outcomes in adolescence, *European Child & Adolescent Psychiatry*, 26(6), pp. 649–658.

Haines Lyon C, Little A, Dobson E, Glover O, Patterson J, Telford J and Noret N (2024) Toilet talk: using a students as researchers approach to problematize and co-construct school toilet policy and practice, *Gender and Education*, 36(7), pp. 801–816.

Hussong J, Mattheus H, Wachs S, Equit M and von Gontard A (2021) Evaluation of a bladder and bowel training program for therapy-resistant children with incontinence, *Journal of Pediatric Urology*, 17(3), p. 302.e1-302.e8.

Hyuga T, Tanabe K, Kubo T, Nakamura S, Nakai H and Moriya K (2023) Vibegron shows high efficacy in pediatric patients with refractory daytime urinary incontinence, *Neurourology and urodynamics*, 42(4), pp. 794–798.

Ikeda H, Oyake C, Oonuki Y, Fuyama M, Watanabe T, Kyoda T and Tamura S (2020) Complete resolution of urinary incontinence with treatment improved the health-related quality of life of children with functional daytime urinary incontinence: a prospective study, *Health and Quality of Life Outcomes*, 18(1), p. 14.

Jacobsen L V, Jørgensen C S, Kaas Sørensen K M, Enemark L, Rittig S and Kamperis K (2021) The efficacy of physiotherapeutic intervention with biofeedback assisted pelvic floor muscle training in children with dysfunctional voiding, *Journal of Pediatric Urology*, 17(6), p. 793.e1-793.e6.

Jessen A S, Hagstroem S and Borch L (2022) Comparison and characteristics of children successfully treated for daytime urinary incontinence, *Journal of Pediatric Urology*, 18(1), p. 24.e1-24.e9.

Joinson C, Heron J and von Gontard A (2006) Psychological Problems in Children With Daytime Wetting, *Pediatrics*, 118(5), pp. 1985–1993.

Joinson C, Heron J, Von Gontard A, Butler U, Emond A and Golding J (2009) A Prospective Study of Age at Initiation of Toilet Training and Subsequent Daytime Bladder Control in School-Age Children, *Journal of Developmental & Behavioral Pediatrics*, 30(5), p. 385.

Kopač M (2024) Pediatric Lower Urinary Tract Dysfunction: A Comprehensive Exploration of Clinical Implications and Diagnostic Strategies, *Biomedicines*, 12(5), p. 945.

Koppen I J N, Vriesman M H, Saps M, Rajindrajith S, Shi X, van Etten-Jamaludin F S, Di Lorenzo C, Benninga M A and Tabbers M M (2018) Prevalence of Functional Defecation Disorders in Children: A Systematic Review and Meta-Analysis, *The Journal of Pediatrics*, 198, pp. 121-130.e6.

Li X, Wen J G, Xie H, Wu X D, Shen T, Yang X Q, Wang X Z, Chen G X, Yang M F and Du Y K (2020) Delayed in toilet training association with pediatric lower urinary tract dysfunction: A systematic review and meta-analysis, *Journal of Pediatric Urology*, 16(3), p. 352.e1-352.e8.

Linde J M, Ekelmans-Hogenkamp J L A, Hofmeester I, Kroes-van Hattem G, Steffens M G, Kloosterman-Eijgenraam F J, Nijman R J M and Blanker M H (2021) Parents' expectations of the outpatient care for daytime urinary incontinence in children: A qualitative study, *Journal of Pediatric Urology*, 17(4), p. 473.e1-473.e7.

Maternik M, Krzeminska K and Zurowska A (2015) The management of childhood urinary incontinence, *Pediatric Nephrology*, 30(1), pp. 41–50.

Melling C and Goyal A (2020) Current pharmacological management of idiopathic overactive bladder in children in the UK: a national survey of practice, *Journal of Pediatric Urology*, 16(1), p. P37.E1-37E8.

Mulders M M, Cobussen-Boekhorst H, de Gier R P E, Feitz W F J and Kortmann B B M (2011) Urotherapy in children: Quantitative measurements of daytime urinary incontinence before and after treatment: According to the new definitions of the International Children's Continence Society, *Journal of Pediatric Urology*, 7(2), pp. 213–218.

Nevéus T and Sillén U (2013) Lower urinary tract function in childhood; normal development and common functional disturbances, *Acta Physiologica*, 207(1), pp. 85–92.

National Institute for Health and Care Excellence (NICE) (2010) *Bedwetting in under 19s*. NICE. Available at: **nice.org.uk/guidance/cg111** (Accessed 31 January 2026).

National Institute for Health and Care Excellence (NICE) (2022) *Urinary tract infection in under 16s: diagnosis and management*. NICE. Available at: **nice.org.uk/guidance/ng224/chapter/Recommendations** (Accessed 9 February 2026).

National Institute for Health and Care Excellence (NICE) (2010b) *Constipation in children and young people: diagnosis and management*. NICE. Available at: **nice.org.uk/guidance/cg99/chapter/Introduction** (Accessed 16 February 2026).

Nieuwhof-Leppink A J, Hussong J, Chase J, Larsson J, Renson C, Hoebeke P, Yang S and von Gontard A (2021) Definitions, indications and practice of urotherapy in children and adolescents: A standardization document of the International Children's Continence Society (ICCS), *Journal of Pediatric Urology*, 17(2), pp. 172–181.

Nieuwhof-Leppink A J, Schroeder R P J, Putte E M van de, Jong T P V M de and Schappin R (2019) Daytime urinary incontinence in children and adolescents, *The Lancet Child & Adolescent Health*, 3(7), pp. 492–501.

Pedersen N, Breinbjerg A, Thorsteinsson K, Hagstrom S, Rittig S and Kamperis K (2022) Transcutaneous electrical nerve stimulation as add-on therapy in children receiving anticholinergics and/or mirabegron for refractory daytime urinary incontinence: A retrospective cohort study, *Neurourology and Urodynamics*, 41(1), pp. 275–280.

Prabhuswamy V K, Krishnamoorthy V and Matippa P (2023) Pediatric urethrovaginal reflux: an underestimated cause of urinary incontinence and its successful management, *International Urogynecology Journal*, 34(12), pp. 3013–3021.

Rogers J (2013) Daytime wetting in children and acquisition of bladder control, *Nursing children and young people*, 25(6), pp. 26–33.

Saarikoski A, Koppeli R, Salanterä S, Taskinen S and Axelin A (2018) Voiding school as a treatment of daytime incontinence or enuresis: Children's experiences of the intervention, *Journal of Pediatric Urology*, 14(1), p. 56.e1-56.e7.

Salö M, Nejstgaard M C, Hambraeus M, Graneli C, Börjesson A, Hagelsteen K and Stenström P (2021) Sex and age differences in lower urinary tract dysfunction in healthy children, *Acta Paediatrica*, 110(9), pp. 2618–2626.

Shoham D A, Wang Z, Lindberg S, Chu H, Brubaker L, Brady S S, Coyne-Beasley T, Fitzgerald C M, Gahagan S, Harlow B L, Joinson C, Low L K, Markland A D, Newman D K, Smith A L, Stapleton A, Sutcliffe S and Berry A (2021) School Toileting Environment, Bullying, and Lower Urinary Tract Symptoms in a Population of Adolescent and Young Adult Girls: Preventing Lower Urinary Tract Symptoms Consortium Analysis of Avon Longitudinal Study of Parents and Children, *Urology*, 151, pp. 86–93.

Sureshkumar P, Jones M, Cumming R and Craig J (2009) A Population Based Study of 2,856 School-Age Children With Urinary Incontinence | Journal of Urology, *The Journal of Urology*, 181(2), pp. 808–816.

Swithinbank L, Heron J, Von Gontard A and Abrams P (2010) The natural history of daytime urinary incontinence in children: a large British cohort – Swithinbank, *Acta Paediatrica*, 99(7), pp. 1031–1036.

Tekgul S, Nijman R J, Hoebeke P, Canning D, Bower W and Gontard A V (2023) *Diagnosis and Management of Urinary Incontinence in Childhood*. Available at: **ics.org/Publications/ICI_4/files-book/Comite-9.pdf** (Accessed 16 February 2026).

Tekgul S, Stein R, Bogaert G, Undre S, Nijman R J M, Quaedackers J, 't Hoen L, Kocvara R, Silay M S, Radmayr C and Dogan H S (2020) EAU-ESPU guidelines recommendations for daytime lower urinary tract conditions in children, *European Journal of Pediatrics*, 179(7), pp. 1069–1077.

Warne N, Heron J, von Gontard A and Joinson C (2024) Mental health problems, stressful life events and new-onset urinary incontinence in primary school-age children: a prospective cohort study, *European Child & Adolescent Psychiatry*, 33(3), pp. 871–879.

Whale K (2016) Effects of continence problems on children, *Nursing Times*, 112(36/37), pp. 8–10.

Whale K, Cramer H, Wright A, Sanders C and Joinson C (2017) 'What does that mean?': a qualitative exploration of the primary and secondary clinical care experiences of young people with continence problems in the UK, *BMJ Open*, 7(10), p. e015544.

Zemer V S, Cohen H A, Richenberg Y, Gerstein M, Atias I, Gur S, Laks Y, Levinsky Y, Dvir O, Brown I, Cohen M and Meir D B (2023) Personal hygiene, environmental conditions, and toilet use of children in primary schools: A cohort study – Journal of Pediatric Urology, *Journal of Pediatric Urology*, 19(6). Available at: **jpurol.com/article/S1477-5131(23)00232-2/abstract** (Accessed 31 January 2026).

RCN quality assurance

Publication

This is an RCN professional resource, designed to help guide decisions about appropriate care of an individual, family or population in a specific context.

Description

Functional daytime urinary incontinence and associated bladder symptoms are common in children and young people. This guidance is designed to provide relevant comprehensive information, including the current evidence-base and recommendations for assessment and treatment.

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