I. URINARY INCONTINENCE IN CHILDREN

A. INITIAL MANAGEMENT

Children present specific management problems for a variety of reasons: assessment requires help from their parents and caregivers; consent to treatment may be problematic; and cooperation in both assessment and treatment may be difficult.

1. INITIAL ASSESSMENT SHOULD INVOLVE A DETAILED INVESTIGATION OF VOIDING AND BOWEL HABITS USING BLADDER/BOWEL DIARIES AND STRUCTURED AND VALIDATED QUESTIONNAIRES.

The child's social environment and general and behavioural development should also be formally assessed and recorded. Physical examination should be done to detect a palpable bladder, faecal loading and exclude anatomic and neurogenical causes. Urine analysis and culture is sufficient to exclude the presence of infection. If possible, the child should be observed voiding.

➢ **Referrals for specialist treatment are recommended for children who have complicated incontinence associated with:**

- Recurrent and febrile urinary infection
- Voiding symptoms or evidence of poor bladder emptying
- Urinary tract anomalies
- Previous pelvic surgery
- Neuropathy or neuropathic origin
- Bowel dysfunction not responsive to treatment
- Comorbid behavioural (e.g. ADHD and ODD) and emotional disorders.

➢ **Initial treatment is recommended for the remaining patients who have:**

- Nocturnal enuresis without other symptoms (monosymptomatic enuresis).
- Daytime symptoms of frequency, urgency, voiding postponement, straining, interrupted voiding, urgency incontinence with or without nighttime wetting.

2. TREATMENT

➢ Initial treatment for **mono-symptomatic nocturnal** enuresis should include:

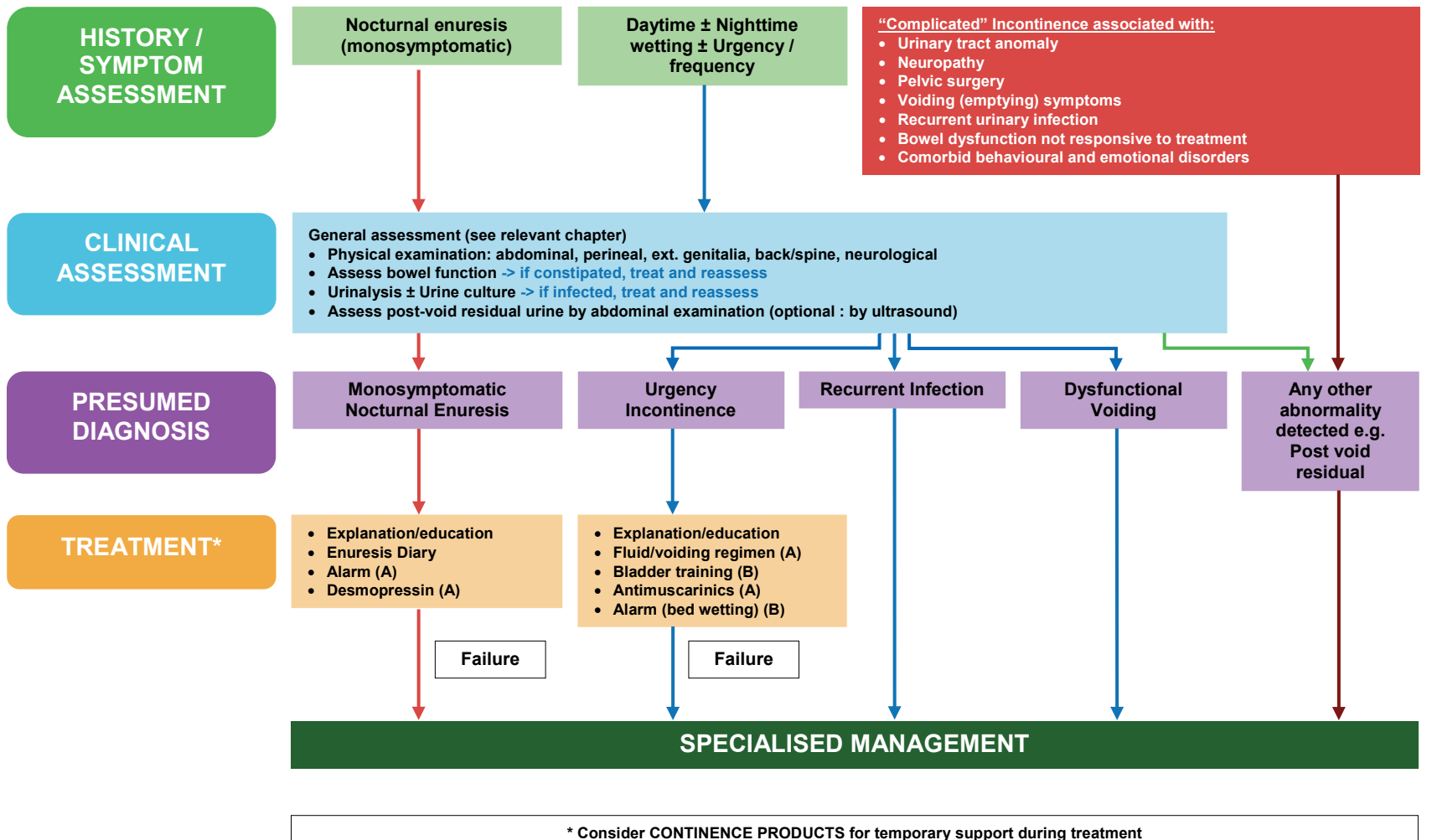
- Parental and child counselling and motivation
- Review of bladder diary with attention to night-time polyuria
- Age appropriate education and demystification or explanation

➢ A choice between either bed wetting alarm (GoR A) or anti-diuretic hormone analogues of desmopressin (GoR A). It may be a parental and child choice if advantages and disadvantages are well explained.

➢ Daytime incontinence should be managed holistically including:

- Counselling, timed voiding, behaviour modification and bowel management when necessary (GoR B);
- Antimuscarinics may be used if the child has OAB symptoms (GoR A)

INITIAL MANAGEMENT OF URINARY INCONTINENCE IN CHILDREN



* Consider CONTINENCE PRODUCTS for temporary support during treatment

I. URINARY INCONTINENCE IN CHILDREN

B. SPECIALISED MANAGEMENT

- **Two groups of children** with **''complicated'' incontinence** should have specialist management from the outset (Fig. 2).
- Children whose incontinence is due to, or associated with, **urinary tract anomalies** and **neuropathy**.
- **Children** without urinary tract anomalies, but with **recurrent febrile infection** and, proven or suspected, **lower urinary tract dysfunction**.
- Children who **fail the basic treatment**, but who have neither neurogenic nor anatomical problems, should also receive specialist management.

Children with comorbid behavioural and emotional disorders require referral to mental health services, as compliance and treatment outcomes are lower.

Assessment and treatment should follow evidence-based practice guidelines

1. ASSESSMENT

- As part of further assessment, the measurement of **urine flow** (in children old enough), together with the **ultrasound estimate of residual urine** and appearance of the bladder wall and rectum are highly recommended. An evaluation of the **upper urinary tracts with ultrasound is also highly recommended**.

Those who do not improve **with treatment** and have neither neurogenic nor anatomical problems **should be reassessed** using bladder diaries, symptom questionnaires, urinalysis, uroflowmetry and residual urine determination.

If there are recurrent and febrile infections, upper tract imaging and possibly a VCUG should be considered. However, endoscopy is rarely indicated.

- **Urodynamics should be considered:**

- If the type and severity of lower tract dysfunction **cannot be explained by clinical findings** or in the presence of possible relevant neuropathy or urinary tract anomalies. (GoR B)
- If **invasive treatment** is under consideration, for example, stress incontinence surgery if there is sphincteric incompetence, or bladder augmentation if there is detrusor overactivity. (GoR B)
- **If upper tract dilation exists** and is thought to be due to bladder dysfunction. (Gor A)
- **Invasive urodynamic studies are generally not recommended** if the child has normal upper tract imaging and is to be treated by noninvasive means. (Gor B)

- **Spinal Imaging** (US/X-ray/MRI) may be needed if a bony abnormality or neuro-logical condition is suspected. (GoR A)

2. TREATMENT

The treatment of incontinence associated with **urinary tract anomalies** is complex and cannot easily be dealt with in an algorithm. In many children **more than one pathology** demands treatment. If there are **complex congenital abnormalities present**, the treatment is mostly surgical and it should be individualised according to the type and severity of the problem (please see Children's Committee Report).

Care should be given by specialist children's nurses and therapists.

- **Initial treatment should be non-surgical.**

- **For stress urinary incontinence** (SUI): pelvic floor muscle training (GoR C).
- **For** OAB symptoms: fluid/voiding regimens and antimuscarinics (GoR A).
- **For voiding dysfunction:** timed voiding, voiding re-education, pelvic floor muscle relaxation (+/- biofeedback), alpha-blocker therapy, and intermittent catheterisation (when PVR >30% of bladder capacity) (GoR A/B).
- **For bowel dysfunction:** high fibre diet and laxatives as appropriate, and. transanal irrigation in severe cases (GoR A).

The child's progress should be assessed and, if quality of life is still significantly impaired, or if the upper urinary tracts are at risk, **surgical treatment** is likely to be necessary.

- **If surgical treatment is required**, then urodynamic studies are recommended to confirm the diagnosis.

- **For USI**, colposuspension, sling surgery, bulking agent injection and AUS may be considered (GoR B).

- **For DO/poor compliance**, botulinum toxin (for DO, and off-label) and bladder augmentation may be performed (GoR B).

- **If the child cannot do IC** then a Mitrofanoff channel may be needed (GoR A).

SPECIALISED MANAGEMENT OF URINARY INCONTINENCE IN CHILDREN