Bladder & Bowel UK
Supporting people with bladder and bowel problems
part of Disabled Living

Nocturnal Enuresis

Practical Guidance for Primary Care

June Rogers MBE
Specialist Nurse
Bladder and Bowel UK
www.bbuk.co.uk

This meeting is funded by Ferring Pharmaceuticals
UK-URO-2000015 February 2020

Bladder and Bowel UK
formerly PromoCon
part of Disabled Living

Declaration of interests

Paediatric Advisor for ACA

Member of NHS England EICC Programme Board

Member of APPG Bladder and Bowel Care

Member of Paediatric Continence Forum

Member of NICE Guideline development group Childhood Constipation

Member of NICE QS's group for Bedwetting and Childhood Constipation

Clinical Advisor for CQC

Speaker for Ferring Pharmaceuticals

Bedwetting the facts – true or false?

- Bedwetting is a common problem that all children will grow out of
- **False**
- Bedwetting is usually not treated until the age of 7 years
- **False**
- Bedwetting is mainly a behavioral problem or caused by deep sleep
- **False**
- Bedwetting can run in families
- **True**
- Treating bedwetting has been shown to improve a child's overall health and well-being
- **True**

Bladder and Bowel UK
formerly PromoCon

Enuresis (bedwetting)

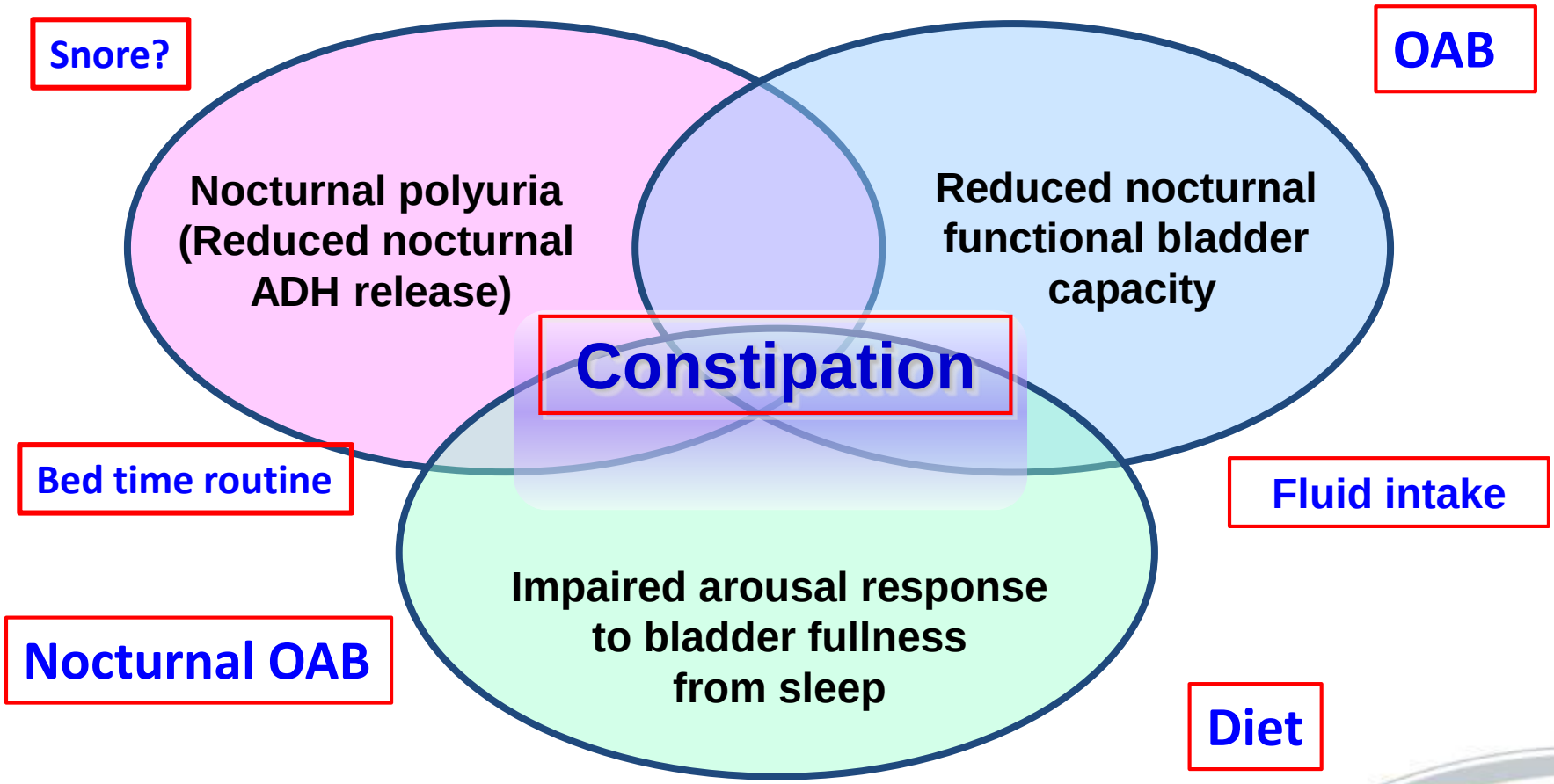
Consider….

- Primary or secondary enuresis?
- Monosymptomatic or non-monosymptomatic enuresis?
- Severity of bedwetting?
- Impact of bedwetting on child and family?

Overview

- Principles of Care
- Assessment and investigation
- Planning management
- Advice on fluid intake and toileting
- Reward systems
- Initial treatment recommendations
- Lack of response to initial treatment recommendations

Nocturnal enuresis: A heterogeneous disorder



Ask about...

- Night time symptoms
- Day time symptoms
- Bowel movements
- Fluid intake
- Diet
- Bedtime routine
- Family history
- Any worries or concerns

Bedwetting and constipation

- A number of studies have highlighted the link between constipation and bedwetting[1.2].
- However the problem arises when both the child and their parents are totally unaware that constipation is present and fail to report it [3].
- As a result the underlying constipation can be missed and can contribute towards increasing problems and treatment failures [4].
- This again reinforces the need for a comprehensive initial assessment, of both bladder and bowel, to identify any potential underlying pathology.
- The historical practice of having isolated ‘enuresis’ only clinics is no longer therefore an acceptable practice.

1. Dehghani SM, Basiratnia M, Matin M (2013) Urinary tract infection and enuresis in children with chronic functional constipation. Iran J Kidney Dis. 2013 Sep;7(5):363-6
2. Hodges SJ, Anthony EY. (2012) Occult megarectum--a commonly unrecognized cause of enuresis. Urology. 2012 Feb;79(2):421-4.
3. McGrath KH, Caldwell PH, Jones MP et al (2008) The frequency of constipation in children with nocturnal enuresis: a comparison with parental reporting. J Paediatr Child Health. ;44(1-2):19-27
4. Ma Y, Shen Y, Liu X. J Pediatr Urol. 2019 Constipation in nocturnal **enuresis** may interfere **desmopressin** management success. Apr;15(2):177.e1-177.e6. doi: 10.1016/j.jpurol.2018.11.019. Epub 2018 Dec 4

Any evidence of bladder/bowel problems?

- Constipation - treat first

- Bladder problems ?
- Overactive bladder / dysfunctional voiding

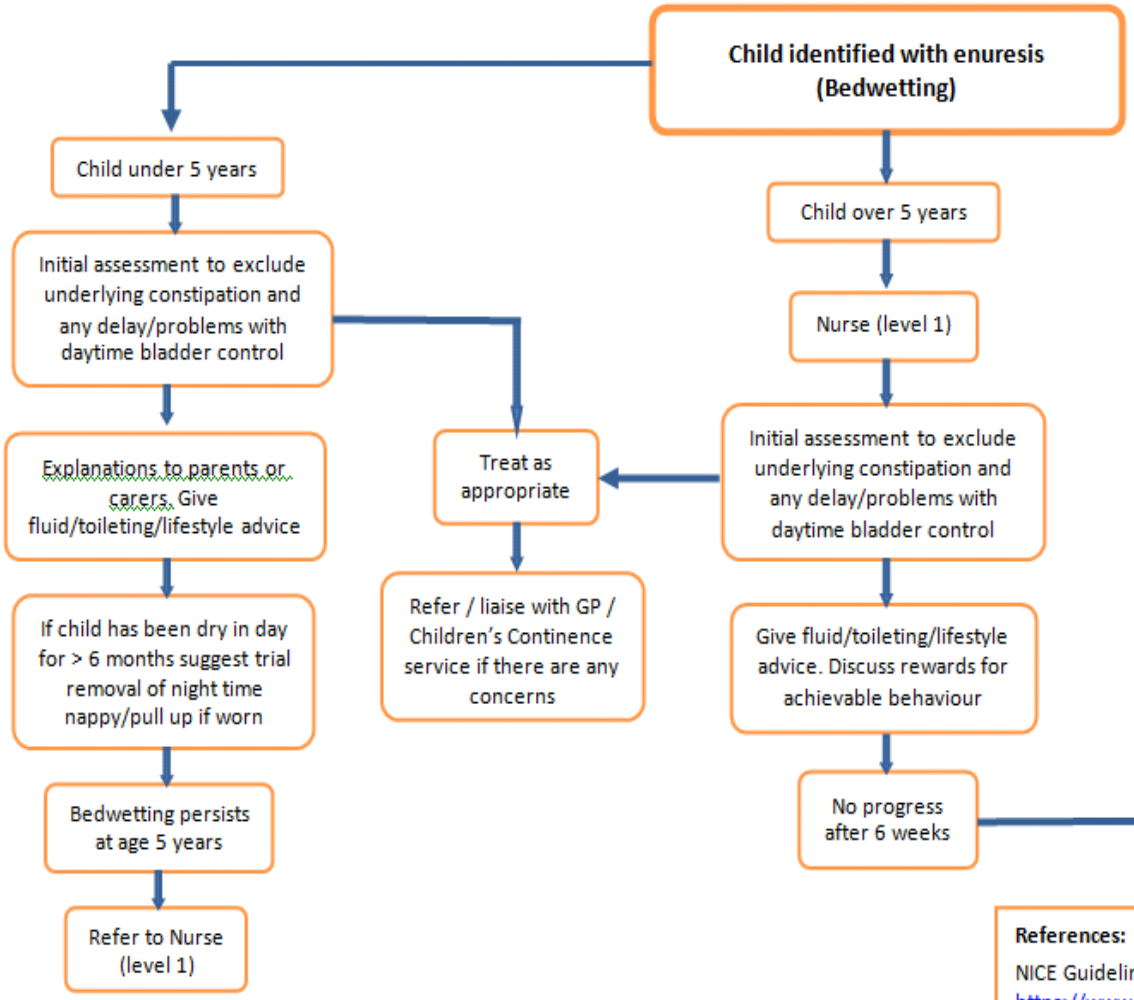
Treat as appropriate

If necessary refer on to professional with specific expertise

Initial lifestyle changes

- Exclude / treat any underlying constipation
- Adjust fluid intake as necessary
- Advise re appropriate toileting routine
- Discuss timing /content of evening meal
- Discuss bedtime routine including ‘quiet time’ with removal of lap tops / tablets etc
- Discuss motivators for behavioural aspects

Children's Continence Care Pathway
Enuresis (Bedwetting) - level 1



Parallel plans for all children

Liaise with relevant healthcare professionals

Provide written information

Consider compliance and safeguarding issues

Red Flags

Reported weight loss or excessive thirst – refer to GP for urinalysis and blood sugar

Concern about parental intolerance or safeguarding issues – refer to local safeguarding policy

Consider medical intervention e.g. desmopressin or alarm, or discussion with /referral to continence service (level 2)

References:

NICE Guideline Bedwetting in children and young people
https://www.nice.org.uk/guidance/cg111

NICE Quality Standard Bedwetting in children and young people
https://www.nice.org.uk/guidance/qs70

stopbedwetting.org

STOPBEDWETTING.ORG

FERRING PHARMACEUTICALS

Developed and funded by Ferring Pharmaceuticals as a service to medicine.

What is bedwetting? | How to help your child | Bedwetting checklist | Useful Resources | Blog

HELP YOUR CHILD STOP BEDWETTING

Bedwetting is a very common childhood problem

It affects almost one in five children aged 5 and one in ten children aged 7. Children will not just "grow out" of this problem. We now know that this is a medical condition and is easily treatable.

Helping parents understand about bedwetting

STOPBEDWETTING.ORG

What is bedwetting? | You're not alone | How to help your child | Superhero checklist | World Bedwetting day

BEDWETTING IS NOT YOUR CHILD'S FAULT

Your child may feel that wetting their bed is their fault, but it is not. Most children are dry at night by their fifth birthday. If your child is five years old and still wetting their bed, there may be a reason why.

Learn more

WHAT CAUSES BEDWETTING?

As a parent or carer, you may feel like you've tried all options to stop your child's bedwetting. There can be many reasons why your child is wetting the bed.

Learn more

BEDWETTING IS A TREATABLE CONDITION

It is important that bedwetting is treated early. There are many ways to help your child overcome bedwetting. Medical options are also available and can be discussed with your child's doctor or nurse.

Learn more

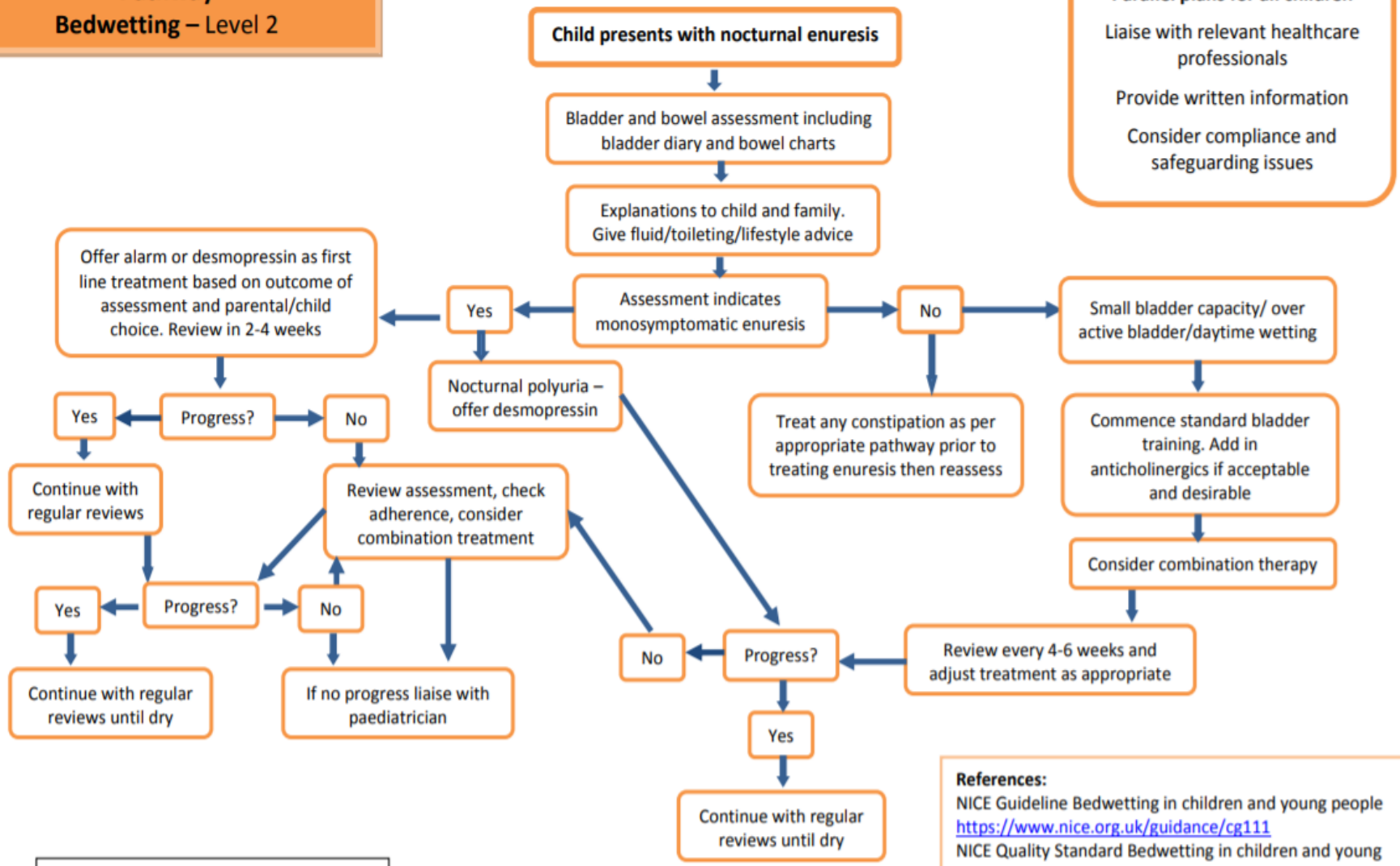
Super Hero checklist

After ticking off the tips you have tried in the checklist, click 'Go' below to get your own personalised discussion guide. This guide will help you prepare for the appointment with your child's doctor or nurse. Speaking to your child's doctor or nurse can make all the difference in treating your child's bedwetting.

- Encouraged my child to have 6–8 water-based drinks per day
- Ensured my child is not having drinks that contain caffeine (tea, coffee, cola and hot chocolate)
- Ensured my child is not having any fizzy drinks, except as an occasional treat
- Made sure my child does not have a drink in the hour before they go to sleep
- Made sure that my child is not eating in the hour before they go to sleep
- Made sure they have switched the TV and other screens off for an hour before bedtime
- Made sure that my child is going for a wee before they go to sleep
- Made sure my child goes to bed at about the same time most nights
- Done a trial with my child of a few nights without night-time pants/nappies
- Printed and completed the superhero diary (urine and stool)

Go

Children's Continence Care Pathway
Bedwetting – Level 2



References:
NICE Guideline Bedwetting in children and young people https://www.nice.org.uk/guidance/cg111
NICE Quality Standard Bedwetting in children and young people https://www.nice.org.uk/guidance/qs70

Initial treatment: desmopressin

Consider desmopressin if child / young person is:

- Over the age of 5 years
- Evidence of nocturnal polyuria
- Rapid-onset and/or short-term improvement in bedwetting is the priority of treatment **or**
- An alarm is inappropriate or undesirable

(see NICE recommendation 1.8.1)

Desmopressin-the evidence

- Frequently recurring' nocturnal polyuria is predictive of response to **desmopressin** in monosymptomatic nocturnal **enuresis** in childhood. Marzuillo P, Marotta R, Guarino S, Fedele MC, Palladino F, Capalbo D, Della Vecchia N, Miraglia Del Giudice E, Polito C, La Manna A. J Pediatr Urol. 2019 Apr;15(2):166.e1-166.e7. doi: 10.1016/j.jpurol.2018.11.004. Epub 2018 Nov 14.

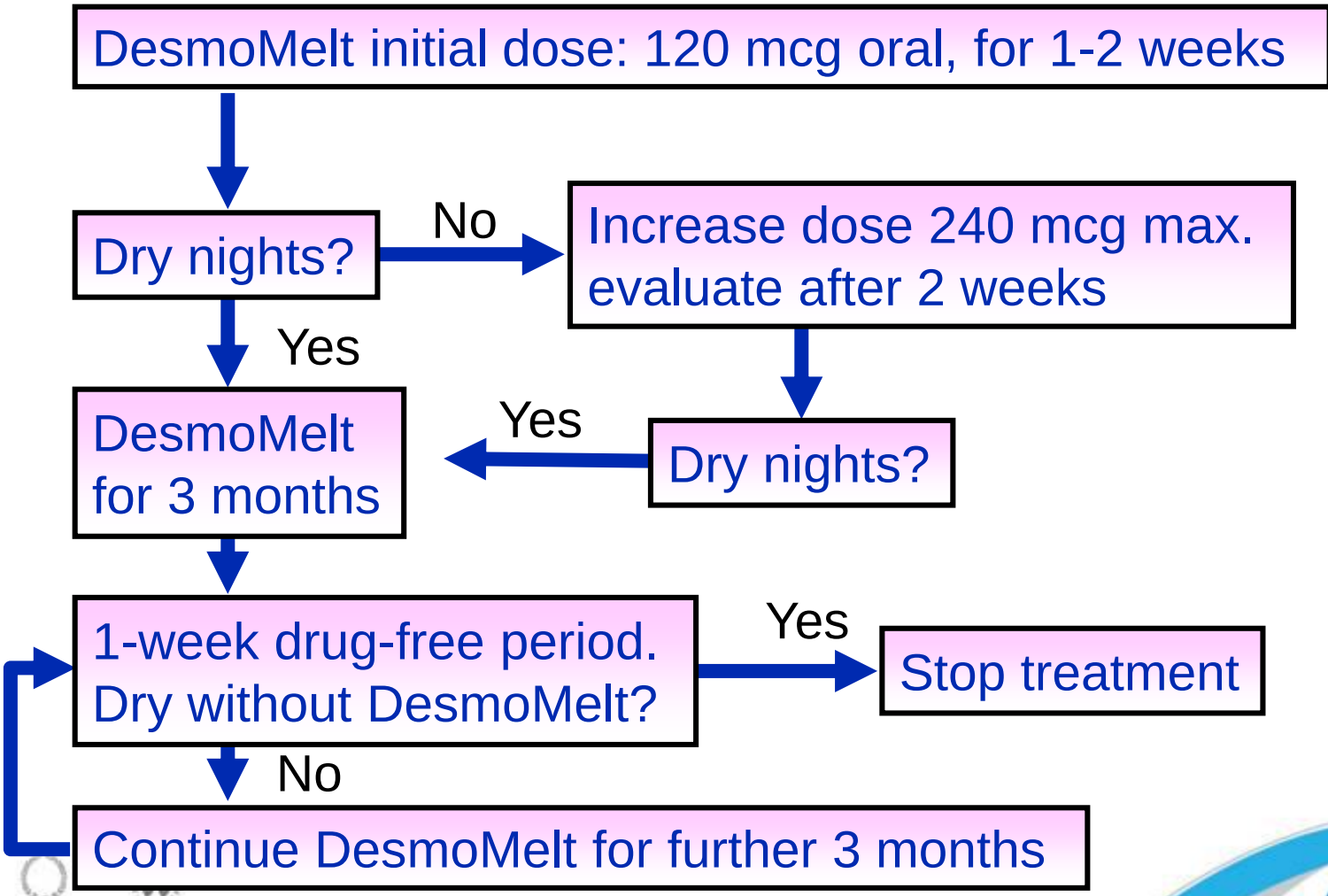
- A randomised comparison of oral desmopressin lyophilisate (MELT) and tablet formulations in children and adolescents with primary nocturnal enuresis. Lottmann H, Froeling F, Alloussi S, El-Radhi AS, Rittig S, Riis A, Persson BE. Int J Clin Pract. 2007 Sep;61(9):1454-60. Epub 2007 Jul 26

- The adverse effects of **oral** desmopressin **lyophilisate** (MELT): personal experience on enuretic children. Ferrara P, Franceschini G, Mercurio S, Del Vescovo E, Ianniello F, Petitti T. Turk J Urol. 2018 Jan;44(1):51-55. doi: 10.5152/tud.2018.03285. Epub 2018 Jan 8

- Increased renal concentrating ability after long-term oral desmopressin lyophilisate treatment contributes to continued success for monosymptomatic nocturnal enuresis. Ikeda H, Watanabe T, Isoyama K. Int J Urol. 2017 Sep;24(9):698-702. doi: 10.1111/iju.13394. Epub 2017 Jun 21.

- Gradual tapering of desmopressin leads to better outcome in nocturnal enuresis. Ohtomo Y, Umino D, Takada M, Fujinaga S, Niijima S, Shimizu T. Pediatr Int. 2015 Aug;57(4):656-8. doi: 10.1111/ped.12614. Epub 2015 May 27.

Desmopressin treatment regimen



DesmoMelt SPC 120mcg, 240 mcg

Improving outcomes with Desmopressin

- DesmoMelt shown to have increased bio availability[1]
- Suggest administering an hour before bed
- Check bladder capacity
- Consider if night time OAB
  - add in trial anticholinergic
  - such as Lyrinel XL
- Consider if polyuria due to osmotic diuresis - trial exclusion of high salt/protein foods

1. De Guchtenaere et al. J Urol. 2011 Jun;185(6):2308-13

Alarm

Consider alarm if child / young person

- is considered mature enough to cope with alarm and motivated to use it
- Is wetting the bed at least x 3 per week
- has family support with no indication of intolerance
- has conducive sleeping arrangements
- appears to have good arousability
- medication not appropriate / contra indicated

Alarm – the evidence

- Systematic Review and Meta-analysis of **Alarm** versus Desmopressin Therapy for Pediatric Monosymptomatic **Enuresis**. Peng CC, Yang SS, Austin PF, Chang SJ. Sci Rep. 2018Nov13;8(1):16755. doi: 10.1038/s41598-018-34935-1.

- The optimal duration of **alarm** therapy use in children with primary monosymptomatic **nocturnal enuresis**. Kosilov KV, Geltser BI, Loparev SA, Kuzina IG, Shakirova OV, Zhuravskaya NS, Lobodenko A. J Pediatr Urol. 2018 Oct;14(5):447.e1-447.e6. doi: 10.1016/j.jpurol.2018.03.021. Epub 2018 May 5.

- Evaluation of the Effectiveness of a Short-term Treatment and Repeat Treatment of **Nocturnal Enuresis** Using an **Enuresis Alarm**. Hyuga T, Nakamura S, Kawai S, Nakai H. Urology. 2017 Jul;105:153-156. doi: 10.1016/j.urology.2017.01.005. Epub 2017 Jan 12.

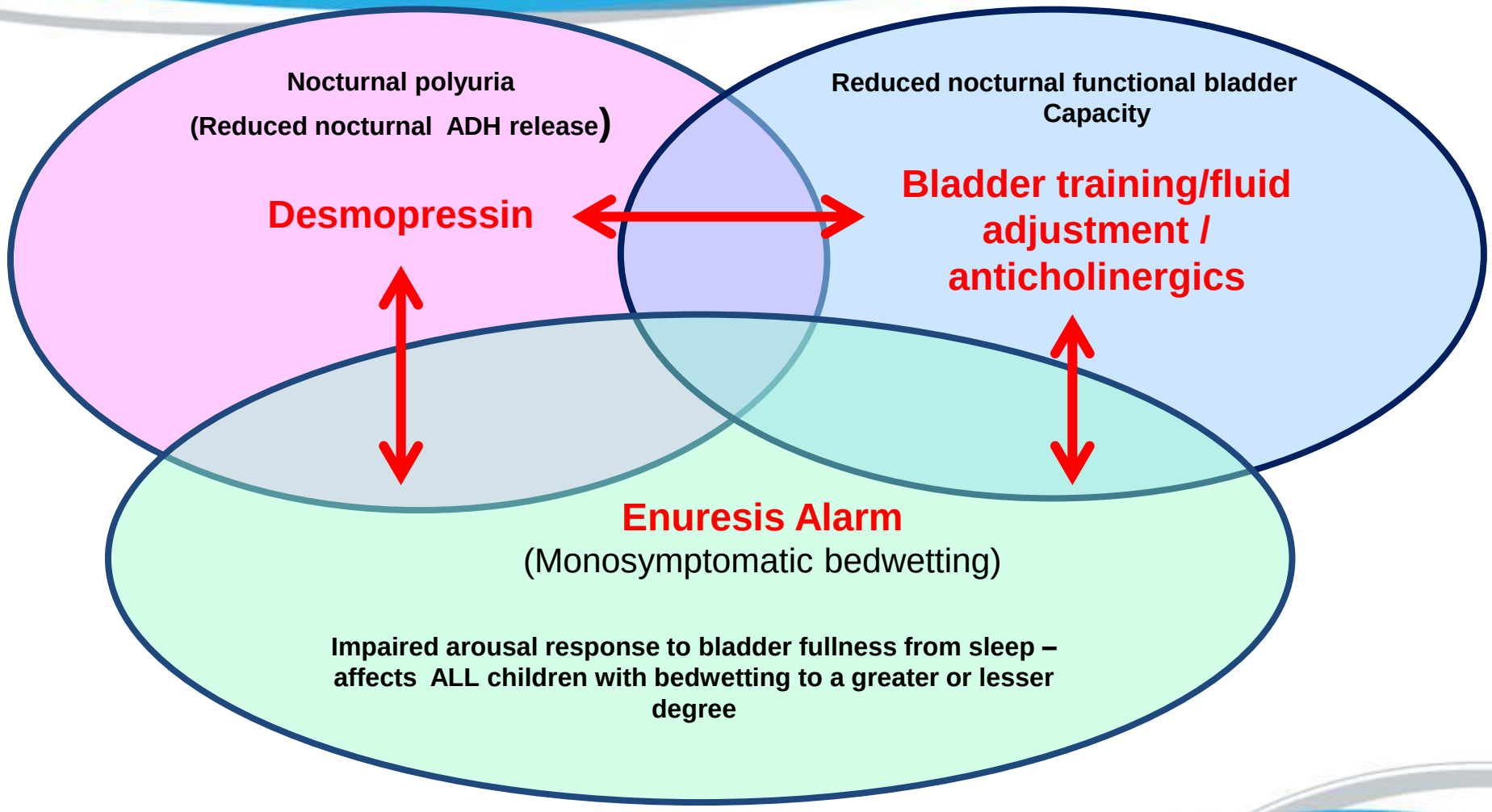
- Night diuresis stimulation increases efficiency of alarm intervention. Kosilov KV, Loparev SA, Ivanovskaya MA, Kosilova LV. J Pediatr Urol. 2015 Oct;11(5):261.e1-5. doi: 10.1016/j.jpurol.2015.03.016. Epub 2015 Apr 30

Improving outcome with alarm

- Decision to use alarm based on outcome of assessment and discussion with child and family
- Consider using alarm clock if unsure of treatment adherence / success
- Suggest using mobile phone as alarm for older children / teenagers
- Combine ‘over - learning’ as part of treatment

Nocturnal enuresis: treatment options

Exclude/treat underlying constipation and take note of genetics/underlying co-morbidities and family dynamics



30% – 50% of children will require combined treatments

Bladder & Bowel UK
Supporting people with bladder and bowel problems
part of Disabled Living

Improving treatment outcomes for children with bedwetting
Matching treatment to assessment outcome

NICE Bedwetting Quality Standard 2: All children with bedwetting should undergo a comprehensive assessment

Findings from history	Possible interpretation
Large wet patches within a few hours of sleep	Typical pattern of bedwetting as a result of nocturnal polyuria (lack of vasopressin).
Wetting more than once with variable wet patches	Typical pattern of bedwetting as a result of possible underlying bladder problem such as overactive bladder.
Bedwetting every night	Classed as severe bedwetting which is less likely to resolve spontaneously than infrequent bedwetting.
Bedwetting after a period of more than 6 months with no night time wetting	Bedwetting is defined as secondary.
Day time symptoms including : Frequency Urgency Abdominal straining Poor stream Wetting accidents History of UTI	Any of these may indicate an underlying bladder disorder, such as overactive bladder (OAB) or dysfunctional voiding. These warrant further assessment.
Constipation	A common co morbidity that can cause bedwetting. It requires treatment (see 'Constipation in children and young people' [NICE clinical guideline 99]).
Soiling	Frequent soiling is usually an indication of underlying constipation with faecal impaction.
Inappropriate fluid intake including: * Inadequate fluid intake * Consumption of fizzy/caffeinated drinks * High fluid intake late in the day	Inadequate fluid intake may mask an underlying bladder problem such as OAB and also may affect the development of an adequate bladder capacity. Fizzy and caffeinated drinks have been shown to irritate the bladder in some cases. Having a high fluid intake later in the day can contribute to bedwetting.
Behavioural and emotional problems	These may be a cause, or a consequence of bedwetting. Treatment should be tailored to the specific requirements of each child or young person and family.
Practical issues	Easy access to a toilet at night, sharing a bedroom or bed, and proximity of parents to provide support are important issues to take into account and address when considering treatment, especially with an alarm.
Family issues, including parental intolerance	A difficult or 'stressful' environment may be a trigger for bedwetting. These factors should be addressed alongside the management of bedwetting

TREATMENT - Tailor to underlying pathophysiology

NICE Bedwetting Quality Standard 4: Children and young people who are bedwetting receive the treatment agreed in their initial treatment plan

The choice of treatment (either alarm or desmopressin) should be informed by the initial assessment, and should take into account the preference of the child and their parents or carers. Factors such as age, associated functional difficulties and disabilities, financial burdens and living situations may affect their preferences. Refer to the BNF for Children and the manufacturers 'Summaries of Product Characteristics' for full prescribing information.

Presenting symptom	Suggested treatment
Normal night time urine output / no day time bladder symptoms / average bladder capacity for age using the formula: Age x 30 + 30 = Maximum voided volume	Consider either alarm or desmopressin (DesmoMelt) as first line treatment, taking into account child's age / motivation / previous experiences / parental expectations and preferences
Nocturnal Polyuria (indicated by wetting large patches within a few hours of going to sleep)	Consider Desmopressin (DesmoMelt) as first line treatment
Small bladder capacity / apparent high arousability / good motivation and good family support	Consider alarm as first line treatment, taking into account child's age and motivation
Day time bladder symptoms, including frequency (> x 7 voids per day) or urgency suggestive of an overactive bladder (OAB)	Initiate bladder retraining programme and introduce anticholinergics (e,g, oxybutynin – Lyrinel XL) if necessary
If single first line treatment fails consider the following: nocturnal polyuria with voided volumes (small bladder) / high arousal threshold nocturnal polyuria with suspected nocturnal OAB OAB / small voided volumes / high arousal threshold	 Desmopressin (DesmoMelt) plus alarm Desmopressin (Desmomelt) plus anticholinergic Anticholinergic plus alarm

Please also refer to NICE Bedwetting Guidelines and treatment Pathway
http://pathways.nice.org.uk/pathways/bedwetting-nocturnal-enuresis-in-children-and-young-people
Bedwetting in Children and Young People Quality Standard 70 (NICE September 2014)
https://www.nice.org.uk/Guidance/QS70

Bladder and Bowel UK
formerly PromoCon
part of Disabled Living

Summary

- Address any underlying comorbidities
- Advise on fluid intake, diet and toileting behaviour
- Address fluid intake (excessive or insufficient)
- Consider a reward system for achievable outcomes
- Consider alarm or medication (depending on circumstances)

For young children who have some dry nights:

- Start with a reward system.
- **For all children and young people:**
- If no response to rewards and advice, consider desmopressin or alarm.
- **For those children and young people who require immediate dryness, or where an alarm is inappropriate, or undesirable.**
- Consider desmopressin for children over the age of 5 years.

Discussion

- Bedwetting is a heterogeneous problem
- It can have a negative impact on the child's health and well being
- It is often linked to underlying co-morbidities.
- All affected children should have a comprehensive initial assessment
- Assessment outcome enables any treatment to be tailored specifically to the child, taking into account family dynamics and treatment preferences.

Thank you!

Bladder and Bowel UK ☎ 0161 607 8219