DHA TELEHEALTH CLINICAL GUIDELINES

FOR VIRTUAL MANAGEMENT

OF ENURESIS – 20

Version 2

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Health Policies and Standards Department

Health Regulation Sector (2024)

INTRODUCTION

Health Regulation Sector (HRS) forms an integral part of Dubai Health Authority (DHA) and is mandated by DHA Law No. (14) of the year (2021) amending some clauses of law No. (6) of 2018 pertaining to the Dubai Health Authority (DHA), to undertake several functions including but not limited to:

- Developing regulation, policy, standards, guidelines to improve quality and patient safety and promote the growth and development of the health sector;
- Licensure and inspection of health facilities as well as healthcare professionals and ensuring compliance to best practice;
- Managing patient complaints and assuring patient and physician rights are upheld;
- Governing the use of narcotics, controlled and semi-controlled medications;
- Strengthening health tourism and assuring ongoing growth; and
- Assuring management of health informatics, e-health and promoting innovation.

The DHA Telehealth Clinical Guidelines aim to fulfil the following overarching DHA Strategic Priorities (2026):

- Pioneering Human-centered health system to promote trust, safety, quality and care for patients and their families.
- Make Dubai a lighthouse for healthcare governance, integration and regulation.

- Leading global efforts to combat epidemics and infectious diseases and prepare for disasters.
- Pioneering prevention efforts against non-communicable diseases.
- Become a global digital health hub.
- Foster healthcare education, research and innovation.

ACKNOWLEDGMENT

The Health Policy and Standards Department (HPSD) developed this Guideline in collaboration with Subject Matter Experts and would like to acknowledge and thank these health professionals for their dedication toward improving quality and safety of healthcare services in the Emirate of Dubai.

Health Regulation Sector

Dubai Health Authority

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EXECUTIVE SUMMARY

Telehealth is based on Evidence Based Practice (EBP) which is the conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual patient. It means integrating individual clinical expertise with the best available external clinical evidence and guidelines from systematic research.

EBP is important because it aims to provide the most effective care virtually, with the aim of improving patient outcomes. As health professionals, part of providing a professional service is ensuring that practice is informed by the best available evidence.

This clinical guideline for the virtual management of Enuresis is presented in the format comprising of clinical history/symptoms, differential diagnosis, investigations and management. Identification of 'Red Flags' or serious conditions associated with the disease is an essential part of this telehealth guideline as it aids the physician to manage patients safely and appropriately by referrals, if indicated during virtual telehealth assessment, to ER, family physicians or specialists for a face to face management.

DEFINITIONS/ABBREVIATIONS

Virtual Clinical Assessment: Is the evaluation of the patient's medical condition virtually via telephone or video call consultations, which may include one or more of the following: patient medical history, physical examination and diagnostic investigations.

Patient: The person who receives the healthcare services or the medical investigation or treatment provided by a DHA licensed healthcare professional.

ABBREVIATIONS

DHA	:	Dubai Health Authority
EBP	:	Evidence Based Practice
ER	:	Emergency Room
DHA	:	Health Regulation Sector
EBP	:	Magnetic Resonance Imaging
ER	:	Urinary Tract Infection

1. BACKGROUND

1.1. The word enuresis is derived from a Greek word (*enourein*) that means "to void urine." Enuresis refers to urinary incontinence that occurs in individuals over the age of five years old. It can occur either during the day, diurnal enuresis, or at night, nocturnal enuresis. The term is frequently used to refer to bedwetting that occurs in children. The primary cause of nocturnal enuresis, especially in children, is the inability of the bladder to involuntarily retain urine after the bladder has reached full capacity and the individual has not awakened to voluntarily void the urine.

1.2. Secondary causes of enuresis include psychological or medical problems, in which the enuresis is a consequence of another health concern. Patients undergoing behavioural or psychiatric crises may intentionally or unintentionally void urine spontaneously throughout the day.

1.3. Enuresis as a condition can be divided into primary and secondary forms.

1.4. Primary enuresis is characterized by the patient spontaneously voiding urine since infancy.

1.5. Secondary enuresis begins several months or years after birth, after the patient has been adequately toilet trained and has developed the ability to control the bladder.

2. SCOPE

2.1. Telehealth services in DHA licensed Health Facilities.

3. PURPOSE

3.1. To support the implementation of Telehealth services for patients with complaints of Enuresis in Dubai Health Authority (DHA) licensed Health Facilities

4. APPLICABILITY

4.1. DHA licensed physicians and health facilities providing Telehealth services.

4.2. Exclusion for Telehealth services are as follows

4.2.1. Emergency cases where immediate intervention or referral is required.

4.2.2. Prescribe Narcotics, Controlled or Semi-Controlled medications.

5. EPIDEMIOLOGY

5.1. Enuresis is common during childhood but may be present in adulthood due to physical and cognitive disorders.

5.2. The prevalence of this condition increases with age range and is more prevalent in children around the age of five years old. Nearly 10% of children at the age of five have nocturnal enuresis, with 7% being boys, as the condition is approximately two times more prevalent in boys at this age. This value decrease, with about 3% of boys having nocturnal enuresis by the age of 10, and about 2% for girls. These values decrease further as these individuals reach their teen years, in which the condition as a whole becomes significantly less prevalent. Approximately 1% of individuals have enuresis by eighteen years of age.

6. CLINICAL HISTORY

6.1. Assessing a patient's history of enuresis can aid the physician in establishing the possible causes of the condition.

6.2. Excessive hydration and nutrition may affect the patient's urinary behavior. The physician should assess the voiding pattern of the patient, both during the day and night, as well as the patient's sleep habits. Any prior medical, behavioural, psychiatric, or emotional conditions should be assessed, as enuresis may be secondary to another disorder.

6.3. Symptoms include spontaneous voiding of urine at least 2 times a week over the course of at least 3 months. The patient may have difficulty urinating, a constant urgency to urinate, or the changes in the appearance of the urine. Wetting of the bed or clothes may occur more frequently throughout the day or night. Symptoms of other conditions may be present if enuresis is secondary to another illness.

6.4. Symptoms include:

6.4.1. Repeated/frequent bed- and clothing-wetting

6.4.2. Wetting at least 2 times a week, for at least 3 months

6.4.3. Frequent, urgent and burning urination

7. DIAGNOSIS AND INVESTIGATIONS

The evaluation of the child with nocturnal enuresis includes history and urinalysis. The main goal of the evaluation is to determine whether the child has bladder and bowel dysfunction or enuresis as a manifestation of an underlying medical problem.

7.1. History — Important issues to be considered in the history:

7.1.1. Daytime wetting or lower urinary tract symptoms, including urgency, holding maneuvers, interrupted micturition, weak stream, and straining. Urologic and neurologic disorders are more common among children with daytime symptoms.

7.1.2. Whether the child ever had a prolonged period of dryness (i.e., six months).

7.1.3. Frequency and trend of nocturnal enuresis (e.g., number of wet nights per week or month, number of episodes per night, time of episodes).

7.1.4. Fluid intake diary - Consuming the majority of fluids during the late afternoon and evening may be associated with nocturnal polyuria, which contributes to nocturnal enuresis.

7.1.5. Fluid intake that exceeds maintenance fluid requirements may indicate diabetes mellitus, diabetes insipidus, or primary polydipsia.

7.1.6. Stooling history and history of soiling (to determine whether there is associated constipation or fecal incontinence, an important cause of secondary enuresis)

7.1.7. Determination of which interventions the family has tried and whether they were successful.

7.1.8. Medical history (e.g., review of systems for symptoms of sleep apnea, diabetes, sickle cell disease or trait, urinary tract infection, gait or neurologic abnormalities).

7.1.9. Family history of nocturnal enuresis.

7.1.10. Social history (particularly important in secondary enuresis because somatic and psychologic comorbidities are more common among children with secondary enuresis)

7.1.11. Assessment of how the problem has affected the child and family; the risk of treatment resistance is increased in children who are not bothered by their enuresis. Postponement of therapy until the child is motivated may be warranted.

7.1.12. Behavioral history or behavior screening questionnaire (to screen for psychiatric comorbidity)

7.1.13. Growth should be assessed as poor growth may indicate renal disease.

7.2. Voiding diary –The voiding diary should include:

7.2.1. Timing of daytime voids

7.2.2. Volume of voided urine (to estimate bladder capacity)

7.2.3. Lower urinary tract symptoms (e.g., difficulty starting or stopping stream; dribbling; sensation of incomplete emptying)

7.3. Urinalysis — The urinalysis (including specific gravity) is obtained as a screen for diabetic ketoacidosis, diabetes insipidus, water intoxication, and/or occult UTI. To screen for diabetes insipidus and possibly differentiate from water intoxication, the urinalysis should be performed on a first morning void. Urine culture is not necessary unless indicated by white blood cells or nitrites on urinalysis.

7.4. Imaging for selected patients — Urologic imaging (renal sonogram and voiding cystourethrogram) is reserved for children who have significant daytime complaints, a history of UTI(s) not previously evaluated, and/or signs and symptoms of structural urologic abnormalities.

Ultrasonography may be helpful in determining postvoid residual volume and bladder wall thickness.

Neurologic imaging (usually MRI of the spine) is indicated in children who are noted to have neurologic abnormalities or abnormalities of the lower lumbosacral spine and lower extremities.

7.5. Personality, psychological, and emotional assessments - should be conducted as deemed appropriate for patient condition. This can assess the patients:

7.5.1. Mood

7.5.2. Affect

7.5.3. Speech

7.5.4. Behavior

7.5.5. Response

8. MANAGEMENT & TREATMENT

8.1. Refer to APPENDIX 1 for the Virtual Management of Enuresis Algorithm

8.2. Management of primary nocturnal enuresis may involve one or a combination of interventions, including:

8.2.1. Education and reassurance (given the high rate of spontaneous resolution)

8.2.2. Enuresis alarms

8.2.3. Motivational therapy

8.2.4. Medication

8.3. The management of secondary nocturnal enuresis involves addressing the underlying stressor if one can be identified. However, most children with secondary

enuresis have no identifiable cause and are treated in the same manner as children with primary enuresis.

8.4. Goals of treatment — The goals of interventions for nocturnal enuresis include:

8.4.1. To reduce the number of wet nights

8.4.2. To reduce the impact of enuresis on the child and family

8.4.3. To avoid recurrence

8.4.4. To stay dry on particular occasions (e.g., sleepover)

8.5. Initial management — Initial management of enuresis usually involves education and motivational therapy and is directed by the telehealth primary care provider.

8.6. Education and advice:

8.6.1. Enuresis is common; it occurs at least once per week in 16% of five-year-olds; enuresis resolves on its own in the majority of children.

8.6.2. Enuresis is the fault of neither the child nor the caregivers; children should not be punished for bedwetting.

8.6.3. The impact of bedwetting can be reduced by using bed protection and washable/disposable products; using room deodorizers; thoroughly washing the child before dressing; and using emollients to prevent chafing.

8.6.4. Keeping a calendar of wet and dry nights helps to determine the effect of interventions.

8.6.5. The child should attempt to void regularly during the day and just before going to bed (a total of four to seven times); if the child wakes at night, the caregivers should take him/her to the toilet.

8.6.6. High-sugar and caffeine-based drinks should be avoided in children with enuresis, particularly in the evening hours.

8.6.7. Daily fluid intake should be concentrated in the morning and early afternoon; fluid and solute intake should be minimized during the evening.

8.6.8. The routine use of diapers and pull-ups can interfere with motivation for getting up at night and is generally discouraged

8.7. Enuresis alarms — Enuresis alarms are activated when a sensor, placed in the undergarments or on a bed pad, detects moisture; the arousal devise is usually an auditory alarm and/or a vibrating belt or pager. The type of alarm should be tailored to the child's needs and abilities. The alarms work through conditioning: The child learns to wake or inhibit bladder contraction in response to the physiologic conditions present before wetting.

8.8. Motivational therapy - Rewards for managing urine voiding, assists in behavioural adjustment (e.g., sticker or star chart)

8.9. Medication:

8.9.1. Desmopressin - is a first-line treatment for enuresis in children older than 5 years whose bedwetting has not responded to advice about fluid intake or toileting. It is an alternative to enuresis alarms for children and families who seek rapid or short-term improvement of enuresis; have failed, refused, or are unlikely to adhere to enuresis alarm treatment; and for whom an enuresis alarm is unsuitable.

8.9.2. Oral - Children > 5 years: 200micrograms at bedtime, only increased to 400micrograms if lower dose not effective. Withdraw for at least 1 week for reassessment after 3 months

8.9.3. Anticholinergic agents - such as oxybutynin chloride (especially in patients with overactive bladder, dysfunctional voiding, or neurogenic bladder):

8.9.4. Dosage: 2.5–3mg twice daily increased to 5mg 2–3 times daily (last dose before bedtime)

9. CAUSES AND DIFFERENTIAL DIAGNOSIS

There are several possible causes and factors associated with enuresis. A small bladder, as well as any structural or functional problems with the urinary system, may not allow for the patient to retain the urine produced during the night. The inability to adequately recognize that the bladder is full may also lead to spontaneous voiding. Other causes and factors include:

9.1. Bladder dysfunction (usually associated with daytime symptoms)

9.2. Chronic kidney disease (associated with poor growth or weight loss, hypertension, abnormal urinalysis [e.g., proteinuria, hematuria], edema, and with progressive deterioration of kidney function, anorexia, vomiting, weakness, and fatigue)

9.3. Hormone imbalance – Especially insufficient production of anti-diuretic hormone

9.4. UTI (associated with pyuria or bacteriuria on urinalysis)

9.5. Posterior urethral valves (associated with incomplete bladder emptying [noted through palpation or percussion of the bladder], straining to void, large volumes of voided urine, slow or intermittent urinary stream, dribbling of urine, UTIs, poor weight gain)

9.6. Ectopic ureter in girls (associated with persistent dampness in underwear and absence of dry episodes)

9.7. Fecal incontinence or constipation (associated with fecal soiling, infrequent stooling, and palpation of stool in the abdomen)

9.8. Sickle cell disease (may be associated with positive family history, abnormal urinalysis (decreased specific gravity, hematuria, proteinuria)

9.9. Seizures (associated with paroxysmal, stereotyped behaviors (e.g., staring, limb movements, loss of tone)

9.10. Diabetes mellitus (associated with polyuria, polydipsia, weight loss, and glucosuria)

9.11. Diabetes insipidus (associated with polyuria, polydipsia, and decreased specific gravity on first morning void)

9.12. Sleep apnea

9.13. Pinworms (associated with perianal excoriation)

9.14. Diabetes – Bed-wetting may indicate diabetes

9.15. Chronic constipation – May lead to dysfunctional sphincters or muscle control

10. REFERRAL CRITERIA

10.1. Referral to pediatric nephrologist/urologist - Children who have clinical or radiographic findings suggestive of renal/urologic abnormality or bladder overactivity should be referred for further evaluation. Such findings include:

10.1.1. Daytime incontinence, urgency, holding measures, increased (≥8 times/day) or decreased (≤3 times/day) voiding frequency (possible bladder dysfunction)

10.1.2. Weak stream, use of abdominal pressure, continuous incontinence, micturition in more than one phase (possible neurogenic bladder or anatomic abnormalities)

10.1.3. Proteinuria, nausea, weight loss, or fatigue (possible kidney disease)

10.1.4. Excessive thirst, need for nighttime drinking (possible polydipsia or kidney disease

10.2. Referral to an enuresis specialist also may be warranted for children who have nightly enuresis. Nightly enuresis is associated with increased risk of persistence into adulthood, which may be improved by early intervention and treatment.

10.3. Referral to a pediatric neurosurgeon may be warranted for children with clinical or radiographic findings suggestive of occult spinal dysraphism (e.g., abnormalities of the lower lumbosacral spine.

10.4. Referral to a sleep specialist may be warranted for children with evidence of adenotonsillar hypertrophy or sleep disordered breathing.

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APPENDIX 1 – VIRTUAL MANAGEMENT OF ENURESIS ALGORITHM