DHA TELEHEALTH CLINICAL GUIDELINES

FOR VIRTUAL MANAGEMENT

OF PALPITATIONS – 14

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 professional's, part of providing a professional service is ensuring that practice is informed by the best available evidence.

Palpitations are common complaints in the community. Although the cause is usually benign, palpitations are occasionally a manifestation of potentially life-threatening arrhythmia. As a result, the concern about missing a treatable condition may lead to the inappropriate use of expensive tests with little diagnostic and therapeutic value. The primary purpose of this Telehealth Guideline to assist doctors when managing patients with palpitation virtually.

This guideline 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

AF	:	Atrial fibrillation
CVA	:	Cerebrovascular Accident
DHA	:	Dubai Health Authority
EBP	:	Evidence Based Practice
ER	:	Emergency Room
MDMA	:	Methylenedioxymethamfetamine

1. BACKGROUND

1.1. Palpitations are an (abnormal) awareness of one's own heartbeat. They are extremely common, and often benign. Palpitations are a sensory symptom experienced by the patients and are defined as unpleasant awareness of the forceful, rapid, or irregular beating of the heart. Patients may at times describe the sensation as a rapid fluttering in the chest, flip-flopping in the chest, or a pounding sensation in the chest or neck, and these descriptions may help elucidate the cause of the palpitations

1.2. Palpitations are common complaints in the community. Although the cause is usually benign, palpitations are occasionally a manifestation of potentially life-threatening arrhythmia. As a result, the concern about missing a treatable condition may lead to the inappropriate use of expensive tests with little diagnostic and therapeutic value.

1.3. Clarification of exactly what a patient means by a palpitation is crucial. Some may mean chest pain, dizziness, shortness of breath or be experiencing indigestion, among other examples. The history is vital in assessing the cause and severity of the problem. Well over half of all patients presenting with palpitations will have no sinister underlying pathology. A history or family history of MI, angina, arrhythmias, thyroid disease, infection, anaemia, lung disease, anxiety, cardiomyopathy or unexplained death is relevant.

1.4. Etiology of Palpitations

1.4.1. Cardiac arrhythmias

a. Extrasystoles (ventricular or supraventricular).

b. Tachycardia (sinus tachycardia, ventricular or supraventricular. Includes atrial fibrillation (AF) and atrial flutter).

1.4.2. Structural heart disease

a. Valvular pathology: mitral valve prolapse, aortic or mitral regurgitation, mechanical valves.

b. Congenital heart disease.

c. Cardiomegaly or hypertrophic cardiomyopathy.

1.4.3. Psychosomatic causes

a. Anxiety.

b. Panic disorder.

c. Somatization disorders.

d. Depression.

1.4.4. Systemic causes

a. Hyperthyroidism.

b. Hypoglycemia.

c. Fever.

d. Anemia.

e. Pregnancy.

f. Menopause.

g. Postural orthostatic hypotension syndrome.

h. Phaeochromocytoma.

i. Hypovolemia.

1.4.5. Medication, recreational drugs and substances

a. Sympathomimetic agents: beta-2 agonists, antimuscarinics, vasodilators.

b. Withdrawal of beta-blockers

c. Alcohol

d. Nicotine

e. Recreational drugs: cocaine, 'ecstasy' - methylenedioxymethamfetamine (MDMA), heroin, cannabis, amphetamines

f. Caffeine: cola, coffee, tea and Red Bull

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 Palpitations 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. RECOMMENDATION

5.1. Virtual Clinical Assessment

5.1.1. Clinical History

a. In the vast majority of outpatients with palpitations, the cause of the palpitations is benign, and extensive and costly investigation is not warranted. Attention to characteristics that identify patients at high risk for serious causes of palpitations will help define the much smaller percentage of patients with palpitations who require referral for more extensive diagnostic testing and management of their condition.

5.1.2. History: The history should include information on the characteristic presentation of the palpitations, associated sensations, and the patient's age at the onset of palpitations.

a. Establish the nature and frequency of palpitations:

- Check what the patient means by palpitations. It should mean an awareness of the heart beating. It may really be a pulsatile tinnitus or a carotid bruit.
- Ask the patient how often it happens, how long it lasts and if there are any precipitating or relieving factors. Sometimes people are only aware of it whilst lying down at night.
- Determine whether the rate is regular or irregular.
- Ask the patient to tap out the beat. This may be regular or irregular. It may be a normal rate or fast. Try to estimate the rate.
- Ask whether the patient has palpitations at present.

b. Ask about accompanying symptoms:

- Sweating or breathlessness. These may be organic or psychosomatic in origin.
- Chest pain. If there is associated chest pain, it may be of sinister significance.
- Syncope or near-syncope.

c. Ask about possible causative factors:

- History or family history of cardiac disease.

- Medication and habits: A history of all medications, including over-the-counter medications, should be obtained. In particular, palpitations may occur with the use of sympathomimetic agents, vasodilators, anticholinergic drugs, or during withdrawal from beta blockers. Illicit drug use (e.g., cocaine or amphetamines) and nicotine use should also be established. Any temporal relationship between palpitations and excessive caffeine intake should also be sought.

d. Consumption of caffeine. Palpitations may be related in time to consumption but assess daily intake too. Tea contains rather less caffeine than instant coffee whilst percolated coffee contains much more. Remember other drinks such as cola and Red Bull contain caffeine.

e. Alcohol consumption

f. Smoking history. The level of nicotine in cigars tends to be rather higher than in cigarettes.

g. Consider possible use of illicit substances, especially cocaine, ecstasy and amphetamines. High levels of anxiety can also result from withdrawal of sedatives such as benzodiazepines.

h. Ask about general health and well-being. There may be great anxiety in the individual's life at present. There may be shortness of breath on exertion, loss of weight or gain in weight, with ankle edema.

i. Relationship to exercise. Onset associated with exercise is a red flag. If the problem is palpitations in a young sportsperson during training, it is imperative to obtain an accurate diagnosis before high-intensity training is resumed. The assumption has been made that palpitations occurring at rest in athletes are benign, but this theory has yet to be validated.

j. Other medical disorders — A history of or symptoms consistent with any of the medical disorders that can be associated with palpitations (e.g., hypoglycemia, thyrotoxicosis, pheochromocytoma) should be determined.

k. Some studies suggest that palpitations can occur more frequently in pregnancy and this should also be asked.

5.1.3. Physical signs/examination (applicable for Video consultation): It may be possible to gain useful information on examination or during video consultation even if the person is between attacks.

a. General examination looking for:

- General state of health.

- Weight change.
- Temperature (if available).
- Anemia.
- Exophthalmos (suggesting thyrotoxicosis).
- Tremor. Ask the person to hold their arms outstretched in front of them with the palms down and to spread their fingers. A fine tremor may suggest thyrotoxicosis or anxiety. Sometimes placing a sheet of paper on the dorsum of the hand accentuates the tremor.
- Nicotine stains.
- Ankle edema.

b. Check the blood pressure (if available).

6. RED FLAGS

6.1. Chest pain

6.2. Acute dizziness or syncope

6.3. Shortness of breath

6.4. Focal neurology (may indicate CVA secondary to an arrhythmia)

6.5. Suspected symptoms of Phaeochromocytoma.

6.6. Hypovolemia/severe dehydration

6.7. Syncope or near-syncope.

6.8. Family history of sudden cardiac death before the age of 40.

6.9. Onset precipitated by exercise.

6.10. Severe systemic cause for palpitations, such as thyrotoxicosis, severe anemia or sepsis.

6.11. Hypotension - this may be due to acute cardiac event, infection, anemia or acute cardiac/pulmonary insult.

7. INVESTIGATIONS

7.1. Via teleconsultation doctors may not be able to make an accurate assessment of patients presenting with palpitations on the basis of history alone. A cardiac cause must be excluded and further investigation is invariably needed depending on the clinical history.

7.2. Investigations include:

7.2.1. ECG: the gold standard is a full 12-lead ECG taken at the time of palpitations. It should, however, be performed even if the palpitations have resolved. It may show an irregular rate and it is easy to decide the type. There may be abnormalities suggestive of structural heart disease such as ischemia, hypertrophy or cardiomyopathy. There may be occasional ectopic that are not currently causing symptoms.

7.2.2. Blood tests: blood tests should include CBC, U&Es, TFTs, LFTs and HbA1c.

7.2.3. Ambulatory ECG: if the ECG does not provide the diagnosis, the frequency of symptoms will determine the best method of recording an episode. Ambulatory ECG monitoring should be arranged in primary care if available, or via specialist referral. A 24-hour or 48-hour Holter monitor may be used for frequent events. An event monitor or self-activated recorder will be needed for less frequent symptoms.

8. MANAGEMENT

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

8.2. It is important where the person is currently experiencing palpitations to exclude any life-threatening arrhythmia or any complications arising from arrhythmia that might cause acute medical problems. In this situation, the diagnosis may be more easily established, along with the decision regarding the need for specialist referral and the urgency of this where required.

9. REFERRAL CRITERIA

9.1. Arrange immediate referral to ER in people with current palpitations and:

9.1.1. Hemodynamic compromise (low blood pressure, tachycardia).

9.1.2. Significant breathlessness

9.1.3. Chest pain. Chest pain could be an indicator of an acute coronary syndrome (ACS).

9.1.4. Acute dizziness could signify a serious arrhythmia, profound bradycardia, or AV heart block.

9.1.5. Syncope or near-syncope.

9.1.6. Family history of sudden cardiac death before the age of 40.

9.1.7. Onset precipitated by exercise.

9.1.8. Severe systemic cause for palpitations, such as thyrotoxicosis, severe anemia or sepsis.

9.1.9. Focal neurology may indicate CVA secondary to an arrhythmia.

9.1.10. Suspected symptoms of Phaeochromocytoma.

9.2. Criteria for cardiology specialist referral

9.2.1. Refer for specialist assessment If further investigations are needed. For example:

c. Exercise testing**:** if the problem is related to exercise then a treadmill ECG or stress echocardiogram is required. Sometimes there is an irregularity at rest that is suppressed on exercise. These tend to be of rather less sinister significance than an irregularity that arises on exercise. Stress testing is also needed in athletes and in those with suspected coronary heart disease.

d. Echocardiogram: required if cardiomyopathy is suspected

9.3. Virtual Management

9.3.1. It should be noted that management is by treating the underlying cause where it is found and is amenable to treatment.

9.3.2. Some causes of palpitations may be managed virtually - for example, many cases of chronic AF, anxiety, panic attacks, stimulant-induced tachycardia, postural orthostatic hypotension syndrome, anemia of known aetiology, etc.

9.3.3. Refer to individual clinical guidance for each condition for further details about the management of these conditions.

9.3.4. Lifestyle advice regarding the risk of cardiovascular risk factors should be given (smoking cessation, diet, exercise).

9.3.5. Advise about driving where relevant.

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APPENDIX 1 – VIRTUAL MANAGEMENT OF PALPITATION ALGORITHM