O7 Malnutrition, electrolyte and endocrine presentations

Assessment of these competencies is via Mini-CEX, CbD (formative or summative) or ACAT-EM and a reflective log. In addition, key aspects of communication and professionalism can be captured through MSF.

Potential presentations in which these competencies could be assessed include the following:

- Any patient with chronic and or severe diarrhoea e.g. Crohns
- Any patient with end stage chronic disease e.g. End stage renal failure or acute renal impairment secondary to sepsis/ medication
- Patient requiring additional support to feed +/- enteral feeding e.g. PEG feeding
- Elderly frail who may have poor nutrition
- Patient with known metastatic cancer and onset of confusion, dehydration, or other signs of hypercalcaemia
- Patients with chronic alcohol dependency and poor nutrition
- Child with severe acute diarrhoea
- Confusion, sweating or decreased LOC in a known diabetic
- SOB, dehydration, fever, in patient with Type 1 DM
- Very high glucose in patient without known DM
- Patient with sepsis and Type 1/II Diabetes
- Suspected new diagnosis of Type 1 Diabetes
- Dehydration, confusion (Hypercalcaemia (non-cancer))
- Tachycardia, anxiety, diarrhoea, weight loss (Thyrotoxicosis)
- Fatigue, bradycardia, weight gain (Myxoedema)

Trainees are expected to achieve EPA level 2 (Direct active – full supervision by senior clinician, with prompting/ verbal and actual guidance and help throughout) in these competencies.

Knowledge/ Skill/ Behaviour	**Detail of competency**
Knowledge	Knows the aetiology, pathophysiology and presentation of dehydration. Is able to recognise the life-threatening complications of dehydration
	Is able to outline the common causes of malnutrition in adults and children
	Is able to anticipate common problems an adult/ child with severe malnutrition may present with including; hypoglycaemia, hypothermia, sepsis, dehydration and electrolyte imbalance, mineral and vitamin deficiencies
	Can outline the identification and management of common vitamin and mineral deficiencies
	Knows the diagnostic criteria for diabetes and glucose intolerance

Knowledge/ Skill/ Behaviour	Detail of competency
	Describes the pathophysiology and likely presentation of common diabetic emergencies e.g. diabetic ketoacidosis
	Outlines the management and pathophysiology of common metabolic and endocrine emergency presentations
	Outlines the impact Type 2 DM may have on life expectancy, risks associated with DM and other health issues/ behaviours and potential long-term complications
	Is able to outline common insulin regimes for Type 1 DM
	Is able to outline common pharmacological and non-pharmacological treatments for Type 2 DM
Skills- History	Is able to screen for potential malnutrition
	Is able to identify patients with poor absorptive capacity e.g. acute colitis
	Is able to take an appropriate detailed history to identify precipitating causes of diabetic ketoacidosis, hyperosmolar non-ketotic coma and hypoglycaemia
	In a patient with suspected new type 2 DM is able to elicit symptoms such as polydipsia, polyuria, repeated skin infections, recent weight loss
	Is able to elicit potential causes for life threatening metabolic or endocrine presentations
Skills - Examination	Can elicit signs of dehydration e.g. dry mucosae, reduced skin turgor
	Is able to elicit signs of common vitamin and mineral deficiencies and any life-threatening complications
	Can elicit signs related to sepsis in a diabetic
	Is able to elicit signs of complications of Type 2 DM
Skills- investigation and treatment	Appropriately assesses and establishes the need for a fluid bolus in an acutely unwell patient
	Administers intravenous glucose and glucagon safely and rapidly to reverse hypoglycaemia
	Prescribes intravenous fluids, insulin and potassium safely for the hyperglycaemic patient
	Can safely correct severe hypo/hyper -natraemia, -kalaemia, -calcaemia
Skills- Clinical decision making and judgement ***(In addition to CC1)***	Identifies those patients that will need critical care and intensive monitoring
	Demonstrates an understanding of the need to assess the fluid status of the acutely unwell patient, when such assessment is necessary, and the need for reassessment and additional monitoring

Knowledge/ Skill/ Behaviour	Detail of competency
	Understands and can implement changes to diabetic treatment, including insulin in diabetic patient with concomitant illness
Behaviour- Communication & professionalism ***(In addition to CC7 & CC8)***	Is able to advise patients on requirements for changes to treatment for diabetes in presence of other illness e.g. sepsis
	Is able to elicit when malnutrition (+/- dehydration) may result from self-neglect
Paediatric	Is able to calculate and prescribe fluid replacement, maintenance fluids and replacement for ongoing losses as per APLS protocols
	Is able to outline different causes and pathophysiology of acute versus chronic malnutrition, especially in children
	Understands how behavioural issues in adolescents and young adults may impact on their diabetic care
	Can identify where malnutrition may be a sign of neglect in a child