### Monash Children's Hospital Referral Guidelines PAEDIATRIC ENDOCRINOLOGY & DIABETES (DPED)

#### **EXCLUSIONS**

Services not offered by Monash Children's Hospital

- Refer to Monash Health Endocrinology Guidelines for those over 18 years of age
- Failure to thrive/general paediatric nutrition issues refer to General Paediatrics
- · Other conditions not covered by the above or related to endocrine disorders

#### CONDITIONS

Diabetes Mellitus
Growth Disorders
Puberty Disorders
Sex Chromosome Disorders
- Turner Syndrome, Klinefelter
Syndrome
Blood Glucose Disorders

Calcium and Bone Disorders
Thyroid Disorders
Pituitary Disorders
Adrenal Disorders
Overweight / Obesity
Disorders of Lipid Metabolism

#### **PRIORITY**

All referrals received are triaged by Monash Children's Hospital clinicians to determine urgency of referral.

#### **EMERGENCY**

For emergency cases please do any of the following:

- send the patient to the Emergency department OR
- Contact the on call registrar OR
- Phone 000 to arrange immediate transfer to ED

**URGENT** 

The patient has a condition that has the potential to deteriorate quickly with significant consequences for health and quality of life if not managed promptly.

ROUTINE

The patient's condition is unlikely to deteriorate quickly or have significant consequences for the person's health and quality of life if the specialist assessment is delayed beyond one month

#### REFERRAL

How to refer to Monash Children's Hospital

#### **Mandatory referral content**

#### Demographic:

Full name

Date of birth

Next of kin

Postal address

Contact number(s)

**Email address** 

Medicare number

Referring GP details including

provider number

Usual GP (if different)

Interpreter requirements

#### Clinical:

Reason for referral

**Duration of symptoms** 

Management to date and response to

treatment

Past medical history

Current medications and medication

history if relevant

Functional status

Psychosocial history

Dietary status

Family history

Diagnostics as per referral guidelines



Click here to download the outpatient referral form

Head of unit: Dr Phil Bergman Program Director:
Prof Nick Freezer

**Last updated:** 19/6/2018





# Monash Children's Hospital Referral Guidelines PAEDIATRIC ENDOCRINOLOGY & DIABETES (DPED)

#### **CONTACT US**

Referrals for all **new** cases of paediatric and adolescent diabetes should be directed straight to the paediatric endocrinologist on 03 9594 6666

#### **Medical practitioners**

To discuss complex & urgent referrals contact: On-call paediatric endocrinologist via Monash Health Contact Centre 9594-6666

#### **General enquiries**

Phone: 8572 3004

#### Submit a referral

Fax referral form to Specialist Consulting Services:

Fax: 8572 3007

Email: scmonashchildrens@monashhealth.org

#### OR

Refer via electronic referral using HealthLink. Details available at https://monashchildrenshospital.org/forhealth-professionals/gp-ereferrals/

Head of unit: Dr Phil Bergman **Program Director:**Prof Nick Freezer

**Last updated:** 19/6/2018





#### **DIABETES MELLITUS**

#### Initial GP Work Up

In all children with suspected diabetes a finger prick blood glucose level should be performed immediately and the result discussed with the on call paediatric endocrinologist via Monash Health contact centre on 9594-6666. If able to be obtained then perform a urine dipstick.

#### Management Options for GP

Contact on-call paediatric endocrinologist on 9594 6666

#### WHEN TO REFER?

#### **Emergency**

Referrals for all new cases of paediatric and adolescent diabetes should be directed straight to the paediatric endocrinologist via Monash Health contact centre on 9594-6666

#### **Urgent**

All patients with known diabetes who have moved from regional Victoria, interstate or overseas

#### Routine

Any patients with diabetes in whom a second opinion is required or transfer within metropolitan Melbourne is required

**BACK** 

#### **GROWTH DISORDERS**

#### Initial GP Work Up

- In all children with growth concerns, measure height and weight and obtain any previous growth information.
- Compare the child's height and weight to standard growth charts (Australian standard growth chart is available via Australasian Paediatric Endocrine Group (APEG) website at www.apeg.org.au in growth section (<a href="https://apeg.org.au/clinical-resources-links/growth-growth-charts/">https://apeg.org.au/clinical-resources-links/growth-growth-charts/</a> under 'Australian and NZ growth charts').
- If considering a referral, investigations are generally not required prior to review. If done prior to review, please ask for the family to bring in bone age x-rays to appointment.

#### WHEN TO REFER?

#### **Urgent**

- All cases of tall stature / accelerated growth in setting of suspected precocious puberty or if bone age xray is more than two years advanced compared to the child's chronological age
- All cases of short stature / slowing growth in girls >12 years of age or boys > 14 years of age

#### **Routine**

Most cases of growth concerns, either short stature / slowing growth or tall stature / accelerating growth, are not usually considered urgent or an emergency and usually do not need investigation prior to endocrine review — if felt to be urgent, please contact the on-call paediatric endocrinologist to discuss



#### **PUBERTY DISORDERS**

#### Initial GP Work Up

- Clinical assessment including height, weight and puberty assessment.
- Compare the child's height and weight to standard growth charts (Australian standard growth chart is available via Australasian Paediatric Endocrine Group (APEG) website at www.apeg.org.au in growth section (https://apeg.org.au/clinicalresources-links/growth-growth-charts/ under 'Australian and NZ growth charts'). Compare the child's pubertal status to the puberty stages diagram on the Australian growth charts listed above.

#### Management Options for GP

Direct the patient/family to the Australasian Paediatric Endocrine Group (APEG) website at <a href="www.apeg.org.au">www.apeg.org.au</a> to look at information booklets in 'Hormone and Me Booklet' section <a href="https://apeg.org.au/patient-resources/hormones-me-booklet-series/">https://apeg.org.au/patient-resources/hormones-me-booklet-series/</a> to see either 'Delayed Puberty' or for all other puberty concerns to see 'Puberty and its problems'.

#### Urgent

WHEN TO REFER?

- All cases of onset of menarche in girls < 9 years of age should be discussed with the on-call paediatric endocrinologist
- All cases of suspected precocious puberty in girls < 8 years of age or boys less than 9 years of age

**BACK** 

## SEX CHROMOSOME DISORDERS - TURNER SYN, KLINEFELTER SYN, OTHER CHROMOSOMAL DISORDERS.

#### Initial GP Work Up

- In newly diagnosed sex chromosome disorder, many investigations may be required and these are usually best coordinated at the initial endocrine clinical appointment. If investigations are required prior to appointment for other reasons, please discuss with on-call paediatric endocrinologist.
- If diagnosis is confirmed, then if the patient/family would like initial resources and information prior to initial endocrine appointment, please direct the them to the Australasian Paediatric Endocrine Group (APEG) website at www.apeg.org.au 'hormone and me booklet series' section (https://apeg.org.au/patient-resources/hormones-me-booklet-series/) to see relevant resource booklet on either Klinefelter Syndrome or Turner Syndrome.

#### Management Options for GP

Generally no management is required prior to endocrine review

#### WHEN TO REFER?

#### **Urgent**

In general all patients with newly diagnosed sex chromosome disorder will be seen urgently



#### **BLOOD GLUCOSE DISORDERS**

#### Initial GP Work Up

- If hypoglycaemia is suspected then a finger prick blood glucose level should be performed immediately
- If less than 2.6 mmol/L then follow referral pathway.

#### Management Options for GP

Emergency management of hypoglycaemia with either oral or buccal glucose containing foods, intramuscular glucagon or intravenous glucose

#### WHEN TO REFER?

#### **Emergency**

All children with acute symptomatic hypoglycaemia (BSL < 2.6 mmol/L)

#### **Urgent**

Children with documented or suspected hypoglycaemia (BSL <2.6 mmol/L) not currently symptomatic

**BACK** 

#### **CALCIUM AND BONE DISORDERS**

#### Initial GP Work Up

 In general, once calcium disorder is recognised, no other tests are required prior to endocrine appointment. In repeat tests are required, please also arrange for measurement of Magnesium, Phosphate, Alkaline Phosphatase, PTH, Vitamin D

#### Management Options for GP

If planning to treat the calcium disorder, please contact on-call paediatric endocrinologist to discuss management option and any investigations required prior to treatment commencing.

#### WHEN TO REFER?

#### **Emergency**

- All children with symptomatic hypocalcemia including stridor, tetany, seizures, altered consciousness.
- · All children with symptomatic hypercalcemia

#### **Urgent**

- All children with hypocalcemia with total calcium less than 2.0 mmol/litre, or ionised calcium less than 1.0 mmol/litre
- · All neonatal calcium disorders



#### **THYROID DISORDERS**

#### Initial GP Work Up

All children with suspected thyroid disorder should have both TSH and Free T4 ordered, not just TSH. Free T3 is usually only required if suspected to be hyperthyroid. Antibody testing in suspected thyroid disease is often useful – if hypothyroidism known/suspected please order anti-thyroid peroxidase antibodies and anti-thyroglobulin antibodies. If hyperthyroidism known/suspected, please order anti-TSH receptor antibodies as well as anti-thyroid peroxidase antibodies and anti-thyroglobulin antibodies Thyroid ultrasound and thyroid nuclear scans are generally not routinely required in most children with hypothyroidism.

In unwell children with suspected thyroid disease, consider other acute illnesses (diabetes, adrenal gland disorder, coeliac disease, other autoimmune disease)

#### Management Options for GP

Prior to commencement of therapy for thyroid disorder (thyroxine or carbimazole) we recommend discussion with the on-call paediatric endocrinologist

#### WHEN TO REFER?

#### **Emergency**

- All cases of suspected neonatal hypothyroidism should be discussed immediately with the oncall paediatric endocrinologist
- All cases of suspected thyroid storm / life threatening hyperthyroidism

#### **Urgent**

- All cases of suspected hypothyroidism in children in which the TSH is > 20 mIU/L or FT4 below the lower limit of normal range for age
- All cases of suspected hypothyroidism in children less than two years outside of neonatal age range
- All other cases of suspected hyperthyroidism
- All cases of suspected thyroid malignancy

**BACK** 

#### PITUITARY DISORDERS

#### Initial GP Work Up

In general extra investigations are not required prior to the initial endocrine appointment, but if considering investigation for other reasons, please discuss with paediatric endocrinologist which pituitary function tests and neuro-imaging may be required.

#### Management Options for GP

Refer to DPEC Clinic

#### **WHEN TO REFER?**

#### **Emergency**

All cases of suspected adrenal insufficiency in association with pituitary disorder

#### **Urgent**

All other cases of suspected pituitary gland disorder

**BACK** 

#### ADRENAL DISORDERS

#### Initial GP Work Up

All children with suspected adrenal insufficiency should have an assessment of blood pressure and finger prick blood glucose.

#### Management Options for GP

Perform any emergency resuscitation and arrange for emergency review in all cases of suspected adrenal insufficiency

#### WHEN TO REFER?

#### **Emergency**

All cases of suspected adrenal insufficiency

#### **Urgent**

All cases of suspected hyper-adrenalism



#### **OVERWEIGHT / OBESITY**

#### Initial GP Work Up

In all children with overweight or obesity concerns, please measure height and weight and obtain any previous growth information. Please compare the child's height and weight to standard growth charts (Australian standard growth chart is available via Australasian Paediatric Endocrine Group (APEG) website at www.apeg.org.au in growth section (<a href="https://apeg.org.au/clinical-resources-links/growth-growth-charts/">https://apeg.org.au/clinical-resources-links/growth-growth-charts/</a> under 'Australian and NZ growth charts'). If considering a referral, investigations are generally not required prior to review. If considering investigation for other reasons, please also arrange for LFT, lipids,

#### Management Options for GP

fasting glucose, TSH and Free T4.

Please refer to the NHMRC government guidelines at <a href="https://www.nhmrc.gov.au/guidelines-publications/n57">https://www.nhmrc.gov.au/guidelines-publications/n57</a> or via APEG website at <a href="https://apeg.org.au/clinical-resources-links/weight-disorders-obesity/">https://apeg.org.au/clinical-resources-links/weight-disorders-obesity/</a>

#### WHEN TO REFER?

#### **Routine**

Routine referrals for overweight / obesity will generally only be accepted for endocrine review when BMI > 95%, usually when in association with other medical concerns such as metabolic syndrome, suspected underlying primary cause. If outside these referral guides, then please consider referral to general paediatrician and / or dietetics

**BACK** 

#### DISORDERS OF LIPID METABOLISM

#### Initial GP Work Up

Generally no further investigations will be required prior to endocrine appointment but if tests are needed for other reasons then please discuss any other investigations with paediatric endocrinologist

#### Management Options for GP

Please discuss management with paediatric endocrinologist prior to commencing medication for abnormal lipid levels in children and adolescents.

#### WHEN TO REFER?

#### **Urgent**

Suspected homozygous familial hypercholestrolemia

#### **Routine**

Abnormal lipid results potentially requiring intervention

