Society for Endocrinology

Specialist adult endocrinology services

Introduction
Adult endocrinology is the medical specialty concerned with the diagnosis and management of adults and adolescents with hormonal disorders. Endocrine disorders are encountered in a wide range of clinical situations and by a variety of different clinicians because of the multi-system nature of endocrine disease. Endocrine disorders are typically chronic and often require life-long follow up, especially in patients with complex pathology with high associated morbidity.

Many endocrine conditions are managed in secondary care, either by physicians specialising in both diabetes mellitus and endocrinology, or endocrinology alone. Rare and complex endocrine conditions are usually managed by physicians whose majority or sole clinical workload is endocrinology or by a general endocrinologist with expertise in a particular condition.

Some endocrine disorders are appropriately managed by non-specialists, or in a shared-care arrangement with specialist input for advice. The precise organisation of endocrine services will depend upon local expertise and infrastructure. It is at the referring clinician's discretion to seek a specialist endocrine opinion at any stage if in the best interests of the patient.

1. Common Endocrine Disorders
Common endocrine disorders may be appropriately managed by a non-specialist but often still need to be referred for a specialist opinion. Examples where specialist referral might be necessary include lack of response or intolerance to conventional treatments, pregnancy, associated co-morbidities and the need for surgical intervention. It may be appropriate for a specialist opinion to be sought even in uncomplicated presentations, and referral patterns are entirely at the discretion of the individual referring clinician.

Examples of common endocrine disorders include:
- Primary hypothyroidism
- Hormone replacement in menopausal women
- Simple obesity
- Metabolic syndrome
- Post-menopausal osteoporosis

2. Less common endocrine disorders
Endocrine disorders with a lower prevalence than those listed above are less commonly encountered in primary care and require an endocrinology specialist to guide the overarching management of the patient. GPs with a special interest or training in endocrinology, or specialist endocrinology nurses may also be involved with the management of such patients. Examples include:

Thyroid
- Thyrotoxicosis
- Nodular thyroid disease
- Hypothyroidism in pregnancy
- Adolescent thyroid disease

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Calcium/bone
- Hyperparathyroidism
- Hypocalcaemic disorders
- Metabolic bone disease
- Secondary osteoporosis

Reproductive
- Polycystic ovary syndrome
- Hirsutism
- Hyperprolactinaemia
- Menstrual disturbance
- Male hypogonadism

Because of the multi-system nature of endocrine disease, an endocrinology opinion is often appropriately sought in patients with non-specific symptoms. Examples include tiredness, malaise or reduced libido. The relevant investigations may require dynamic endocrine tests and experience in interpreting the results, which typically occurs with input from a specialist endocrine nurse and endocrinologist.

Endocrinologists may also be referred patients because clinical biochemists have seen results that require an endocrinology opinion. In this situation the clinical biochemist will alert the clinician to the abnormal results and referral is at the discretion of the supervising clinician.

3. Rare and complex endocrine disorders
A number of rare and complex conditions require specialist expertise and are commonly managed in specialist endocrine centres. Local expertise will drive the pattern of referral in a particular region. Because complex endocrine conditions often require a multi-disciplinary approach in terms of radiology, surgery, pathology, specialist nurse and clinical biochemistry expertise, this usually occurs in a hospital setting. As long as the endocrinologist looking after such conditions has the relevant competence and the appropriate network or clinical team in place, it is not essential that all components of the team are located at one site. The precise organisation of services should be organised at a local level.

Examples of rare and complex endocrine disorders include:

Thyroid
- Differentiated thyroid cancer
- Medullary thyroid cancer
- Other thyroid malignancies
- Thyroid ophthalmopathy

Calcium/bone
- Complex hyperparathyroidism
- Familial calcium/phosphate disorders
- Male or juvenile osteoporosis
- Osteogenesis imperfecta
- Complex metabolic renal stone disease
- Paget’s disease of bone

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Reproductive
- Turner's syndrome
- Complex polycystic ovary syndrome
- Secondary virilising disorders
- Female infertility
- Male infertility
- Endocrine disease in pregnancy

Pituitary
- Non-functioning adenoma
- Acromegaly
- Cushing's disease
- Macro-prolactinoma
- TSHoma
- Gonadotropinoma
- Para-sellar tumours
- Infiltrative hypothalamo-pituitary disease
- Craniopharyngioma
- Congential and acquired hypopituitarism
- Pituitary incidentaloma

Adrenal
- Primary adrenal failure
- Congenital adrenal hyperplasia
- Adrenal incidentaloma
- Adrenal Cushing's syndrome
- Hyperaldosteronism
- Phaeochromocytoma
- Virilising adrenal lesions

Neuro-endocrine tumours
- Carcinoid tumours
- Insulinoma
- Gastrinoma
- Glucagonoma
- Non-functioning pancreatic tumours

Familial Endocrine Disorders
- Multiple Endocrine Neoplasia Type 1
- Multiple Endocrine Neoplasia Type 2
- Von Hippel Lindau disease
- Neurofibromatosis

Transitional endocrinology
- Premature puberty
- Delayed puberty
- Growth disorders
- Late effects of childhood malignancy

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Desired members of the team for complex endocrine disorders
It is recognised that complex endocrine conditions require several members within the team in order for patients to be managed optimally. Endocrinologists have particularly close relationships with endocrine specialist nurses, who perform the dynamic tests and provide important aspects of patient management, and clinical biochemists, who supervise and quality-control the laboratory assays. In addition radiologists, surgeons, obstetricians, paediatricians and oncologists with specific expertise may be required to be part of a particular network or team. Examples of desirable members of such teams/networks include:

Thyroid
- Endocrinologist
- Endocrine nurse specialist
- Radiologist with expertise in thyroid imaging
- ARSAC license holder
- Thyroid pathologist
- Orbital surgeon
- Thyroid surgeon
- Paediatric endocrinologist
- Clinical geneticist
- Multi-disciplinary thyroid cancer network

Calcium/bone
- Endocrinologist
- Endocrine nurse specialist
- Radiologist with expertise in parathyroid imaging
- Dexa-scan availability
- Clinical biochemist
- Parathyroid surgeon

Reproductive
- Endocrinologist
- Endocrine nurse specialist
- Reproductive gynaecologist
- Radiologist with expertise in pelvic ultrasound
- Medical obstetrician
- Clinical geneticist
- Paediatric endocrinologist
- Cardiologist
- Clinical Psychologist

Pituitary
- Endocrinologist
- Endocrine nurse specialist
- Neuro-radiologist
- Inferior petrosal sinus sampling
- Pituitary surgeon
- Radiotherapist
- Neuro-pathologist
- Established multi-disciplinary team network

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Adrenal
- Endocrinologist
- Endocrine nurse specialist
- Radiologist
- Adrenal venous sampling
- Anaesthetist
- Laparoscopic adrenal surgeon
- Clinical geneticist
- Oncologist
- Established multi-disciplinary team network

Neuro-endocrine tumours
- Endocrinologist
- Endocrine nurse specialist
- Radiologist
- Hepatobiliary surgeon
- Clinical geneticist
- Oncologist
- Established multi-disciplinary team network

Familial endocrine disorders
- Endocrinologist
- Endocrine nurse specialist
- Radiologist
- Clinical geneticist
- Hepatobiliary surgeon
- Pituitary surgeon
- Parathyroid surgeon

Transitional endocrinology
- Endocrinologist
- Endocrine nurse specialist
- Paediatric endocrinologist
- Paediatric endocrine nurse
- Gynaecologist
- Clinical psychologist
- Oncologist

Establishing competence in specialist endocrinology
Endocrinologists should manage conditions whose complexity is appropriate to their level of experience and competence. The definition of competence is less easy to quantify for physicians than surgical and procedure-based medical specialties. There is a wide scope of endocrinology practitioners in the UK, whose interests and expertise range from predominantly general internal medicine, a combination of diabetes and endocrinology, predominantly / only complex diabetes, and predominantly / only complex endocrinology. The definitions of competence are likely to be covered by contemporaneous revalidation criteria. Currently, the following may be seen as markers of competence in managing complex endocrine disease:

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- Previous experience and training in complex endocrinology
- Majority of specialist time dedicated to endocrinology
- Higher post-graduate degree in endocrine-related research
- Working within established multi-disciplinary networks
- High case-load of rare and complex endocrine disease
- Demonstration of audit and data-base collection
- Development of up-to-date endocrine protocols
- Development up-to-date patient information sheets
- Steering of intra- and inter-departmental academic / clinical meetings
- Clinical and / or non-clinical research with continued publications
- Presentations at national / international meetings
- Contribution to appropriate learned society / professional body

References

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6 Radioiodine in the management of benign thyroid disease. Report of a Working Party. Royal College of physicians 2007

7 Guidelines for the management of gastro-enteropancreatic neuro-endocrine (including carcinoid) tumours. UK and Ireland Neuro-endocrine Tumour Society (UKINETS) 2006

8 NICE Service guidance for improving outcomes for people with brain and other CNS tumours 2006

9 Pituitary tumours: recommendations for service provision and guidelines for management of patients. Committee on Endocrinology of the Royal College of Physicians and the Society for Endocrinology, and the Research Unit of the Royal College of Physicians 1997

Miles J Levy, MD FRCP
for and on behalf of the Society for Endocrinology's Clinical Committee
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