Endocrinology Practice Review™

Making Education Easy

Issue 13 - 2024

In this issue:

Abbreviations used in this issue:

ATDs = antithyroid drugs; **CGM** = continuous glucose monitoring; **COCP** = combined oral contraceptive pill; **CPD** = continuing professional development; **FLS** = fracture liaison services; **GLP-1** = glucagon-like peptide 1; **GPs** = general practitioners; **HbA1c** = haemoglobin A1c; **IAb+** = islet autoantibody-positive; **ITT** = insulin tolerance test; **OGTTs** = oral glucose tolerance tests; **PBAC** = Pharmaceutical Benefits Advisory Committee; **PBS** = Pharmaceutical Benefits Scheme; **PCOS** = polycystic ovary syndrome; **PWS** = Prader-Willi syndrome; **MBS** = Medicare Benefits Schedule; **T2DM** = Type 2 diabetes mellitus.

Welcome to the 13th issue of Endocrinology Practice Review.

This Review covers news and issues relevant to clinical practice in endocrinology. It will bring you the latest updates, both locally and from around the globe, on topics such as new and updated treatment guidelines, changes to medicine reimbursement and licensing, educational and professional body news, and more. Finally, on the back cover, you will find our COVID-19 resources and a summary of upcoming local and international educational opportunities, including workshops, webinars, and conferences.

We hope you enjoy this Research Review publication and look forward to hearing your comments and feedback.

Kind Regards,

Dr Janette Tenne
Editor
janette.tenne@researchreview.com.au

Clinical Practice

Long-term osteoporosis care for patients who have attended an Australian fracture liaison service

A study published earlier this year aimed to develop consensus recommendations for long-term osteoporosis care for patients transitioning from Australian fracture liaison services (FLS) to primary care. The expert panel comprised 33 participants, primarily FLS clinicians (78.8%) from New South Wales (81.8%) working in metropolitan areas (60.6%). Consensus for 32 of 34 statements was achieved through the Delphi process, with strong agreement on patient education, communication, and the GP-patient relationship. The consensus statements developed offer a framework for standardising and improving coordination between FLS and primary care, potentially enhancing long-term outcomes for patients with osteoporosis.

There was consensus on the distinct but complementary roles of FLS clinicians and GPs. FLS clinicians were identified as treatment "initiators", responsible for patient identification, investigation, education, and initial prescribing. GPs were seen as treatment "continuers", managing long-term adherence, monitoring, and ongoing care. Clear communication between FLS and primary care was emphasised, with recommendations for timely, comprehensive written correspondence.

Experts agreed on the need for standardised long-term monitoring recommendations, including bone density measurements and biochemical testing. However, opinions diverged on the frequency and use of serial bone density scans, with some favouring routine testing and others advocating for individualised approaches.

Patient education was unanimously supported, with consensus on comprehensive education covering osteoporosis, fracture risk, management strategies, and treatment plans. Finally, assessing and promoting strong GP-patient relationships was recognised as being crucial for successful long-term care.

Two statements failed to reach consensus: one regarding the role of primary care in long-term osteoporosis management and another on shared responsibility for adherence monitoring between FLS and GPs. These areas of disagreement highlight ongoing challenges in defining roles and allocating resources for long-term osteoporosis care.

https://tinyurl.com/45ckjcpc

Earn CPD

Nursing and Midwifery Board of Australia (NMBA) Journal reading and watching videos (including Research Reviews') may be considered a self-directed activity set out in the NMBA Registration Standard: Continuing Professional Development. One hour of active learning will equal one hour of CPD. Details at NMBA CPD page.

Earn CPD

Royal Australasian College of Physicians (RACP) MyCPD participants can claim the time spent reading and evaluating research reviews as CPD in the online MyCPD program. Please contact MyCPD@racp.edu.au for any assistance.

Asia-Pacific consensus on long-term and sequential therapy for osteoporosis

A recent consensus paper presents recommendations for long-term and sequential therapy for osteoporosis in the Asia-Pacific region. For people with a very high risk of fractures, the panel recommends anabolic agents as first-line treatment, followed by antiresorptive agents. For those who develop new fractures or have ongoing high fracture risk despite antiresorptive treatment, anabolic therapy should be considered. The consensus also addresses transitions between medications, suggesting that switching to more potent agents or anabolic treatment may be appropriate for inadequate responders.

Regarding specific medications, the panel recommends prescribing antiresorptive agents after completing anabolic therapy. Bisphosphonates should be prescribed after stopping denosumab to prevent rebound bone loss and multiple vertebral fractures. Teriparatide or selective estrogen receptor modulators can be considered instead of discontinuing treatment for patients who develop medication-related osteonecrosis of the jaw. Teriparatide is also recommended for patients who develop atypical femoral fractures. Drug holidays following bisphosphonate therapy should only be considered for patients who have achieved adequate increases in bone mineral density and/or remained fracture-free, with regular fracture risk reassessments.

The consensus emphasises individualised treatment based on shared decision-making between patients and healthcare providers. It advocates for implementing country-specific case management systems, such as fracture liaison services, to enhance treatment compliance, adherence, and fracture prevention. The panel also notes that long-term and sequential therapy for osteoporosis is cost-effective for healthcare systems.

https://tinyurl.com/5b7jn4ft

Prader–Willi syndrome: Guidance for children and transition into adulthood

Prader-Willi syndrome (PWS) is a rare genetic neurodevelopmental disorder with an incidence of 1 in 10,000–30,000 births, characterised by hypotonia and poor feeding in infancy, followed by hyperphagia and obesity risk later in childhood. A recent publication provides comprehensive guidance on managing children and adolescents with PWS up to age 18, covering diagnosis, clinical assessment, and transition to adult services. The guidance is based on information gathered from peer-reviewed scientific reports and the expertise of a range of experienced clinicians in the United Kingdom and Ireland caring for patients with PWS.

A multidisciplinary approach, ideally through specialised clinics with community support, is recommended. Genetic testing should be done to confirm a diagnosis, with methylation analysis of the SNRPN gene on chromosome 15q11-13 as the initial test.

To improve body composition, motor development, and potentially cognition, early initiation of growth hormone therapy by one year is preferable. Due to potential respiratory complications, cardiorespiratory polysomnography is mandatory before starting growth hormone therapy. There are no effective pharmacological treatments for hyperphagia. Thus, strict dietary management and food security practices are recommended to prevent obesity. Energy requirements are 60–80% of standard recommendations.

Developmental delay, learning disabilities, and behavioural issues can be managed with appropriate educational support and interventions. Further, the assessment and management of scoliosis, which is expected due to hypotonia, is advised. Regular monitoring for endocrinopathies, including growth hormone deficiency, hypogonadism, hypothyroidism, and adrenal insufficiency, is essential. Further, sex hormone replacement is recommended for both males and females to manage hypogonadism. Careful monitoring of IGF-1 levels during growth hormone therapy and individualised approaches to puberty induction and sex hormone replacement is recommended. Transition planning to adult services should include consideration of continuing growth hormone therapy in adulthood.

Overall, this comprehensive guidance aims to standardise and optimise care for individuals with PWS, emphasising the complex, multifaceted nature of the syndrome and the need for coordinated, specialised care throughout the lifespan.

https://tinyurl.com/yscteuy8

Pharmacological management of polycystic ovary syndrome

Polycystic ovary syndrome (PCOS) is a common female endocrine disorder affecting approximately 1 in 8 women globally. It is associated with reproductive, cardiometabolic, dermatological, and psychological features that can significantly impact a woman's wellbeing. The 2023 International Evidence-based Guideline for PCOS provides updated diagnostic criteria and management recommendations.

Diagnosis in adults now includes anti-Müllerian hormone concentration as an alternative to ultrasound, requiring two of three criteria: oligo-anovulation, clinical/biochemical hyperandrogenism, and polycystic ovaries. For adolescents, both oligo-anovulation and hyperandrogenism are necessary, with ultrasound not recommended within 8 years of menarche. Assessment should include screening for comorbidities such as type 2 diabetes, cardiovascular disease, obstructive sleep apnoea, and psychological disorders. Women should be informed about the increased risk of endometrial cancer, although absolute risk remains low.

Pharmacological management is tailored to individual patient concerns. The combined oral contraceptive pill (COCP) is first-line for irregular periods and clinical hyperandrogenism. Low-dose estrogen formulations are preferred, but no specific type is recommended due to insufficient evidence for superiority. Metformin is first-line for excess body weight and metabolic effects, particularly in women with body mass index >25 kg/m². It improves anthropometric outcomes and metabolic parameters and may restore menstrual cyclicity. Inositol, an over-the-counter supplement, shows limited benefits for some metabolic outcomes but is associated with fewer adverse effects than metformin. Anti-obesity drugs like orlistat and GLP-1 receptor agonists can be considered alongside lifestyle interventions for weight management in adults but are not recommended for adolescents. Effective contraception is crucial due to limited safety data in pregnancy. Antiandrogens, primarily spironolactone, are reserved for cases where COCP is contraindicated or ineffective for hirsutism. They require concurrent contraception due to potential teratogenicity.

Managing PCOS requires a comprehensive, patient-centred approach incorporating education, empowerment, and shared decision-making. Pharmacotherapy should be tailored to individual symptoms, including COCP, metformin, inositol, anti-obesity drugs, and antiandrogens. Lifestyle interventions remain a cornerstone of management for all women with PCOS.

https://tinyurl.com/2bwedudf

Exercise in the management of polycystic ovary syndrome

Exercise and Sports Science Australia have released a position statement providing evidence-based recommendations for exercise in managing PCOS. The statement emphasises exercise as a first-line treatment for PCOS due to its beneficial effects on insulin sensitivity, androgen levels, ovarian function, cardiometabolic health, and quality of life. Exercise improves insulin resistance by enhancing glucose uptake in skeletal muscle, potentially through AMP-activated protein kinase activation. It may also reduce hyperandrogenism by increasing sex hormone-binding globulin levels and improving ovarian function.

For general health maintenance, adults with PCOS should aim for 150–300 minutes of moderate-intensity or 75–150 minutes of vigorous-intensity aerobic activity per week, plus muscle-strengthening activities twice weekly. For additional benefits, including modest weight loss, 250 minutes of moderate-intensity or 150 minutes of vigorous-intensity aerobic activity is recommended. Adolescents should engage in 60 minutes of moderate-to-vigorous activity daily.

The statement highlights the importance of individualised, progressive exercise programs considering the patient's physical capacity, preferences, and potential barriers. Exercise professionals should conduct comprehensive assessments, including anthropometric measures, cardiovascular health, physical capacity, and patient-reported outcomes. They should also be aware of potential medication interactions and the benefits of combining exercise with dietary interventions for weight management.

Special considerations are outlined for patients with comorbidities like obesity, diabetes, osteoarthritis, and mental health issues. The statement emphasises the need for a multidisciplinary approach, with exercise professionals collaborating with physicians, dietitians, and psychologists to provide holistic care.

https://tinyurl.com/4p4ze37m

Consensus guidance for monitoring individuals with islet autoantibody-positive pre-stage 3 type 1 diabetes

A recent consensus report provides expert clinical advice on monitoring individuals with islet autoantibody-positive (IAb+) pre-stage 3 type 1 diabetes. The guidance was developed by international experts convened by JDRF to address the growing need for clear monitoring recommendations as islet autoantibody screening becomes more common.

The report emphasises that persistent multiple IAb+ status confirms early-stage (stage 1 or 2) type 1 diabetes, while single IAb+ status indicates risk. Monitoring aims to prevent diabetic ketoacidosis at onset, identify candidates for interventions, and provide education and support. The guidance covers children, adolescents, and adults, acknowledging limited data in older adults.

Key recommendations include confirming initial IAb+ results with a second sample, preferably using standardised assays. For single IAb+ children, monitoring is most critical in the first two years after seroconversion, with frequency depending on age. Multiple IAb+ children require ongoing metabolic monitoring, with options including home glucose monitoring, periodic continuous glucose monitoring (CGM), haemoglobin A1c (HbA1c), and oral glucose tolerance tests (OGTTs).

The report advocates partnerships between primary care and specialists, with roles determined collaboratively. Primary care providers should understand type 1 diabetes staging and monitoring methods. Referral to endocrinology is recommended when stage 2 criteria are met, or symptomatic hyperglycaemia develops.

Monitoring tools discussed include self-monitoring blood glucose, CGM, OGTT, random glucose, HbA1c, and repeat antibody testing. The guidance notes emerging evidence on CGM metrics for predicting progression risk. Psychosocial support and education on diabetes symptoms and diabetic ketoacidosis risk are emphasised as crucial components of care.

The report acknowledges variability in healthcare resources and aims to provide actionable advice across diverse settings. It highlights the need for further research to strengthen future recommendations, particularly in adults and general population screening cohorts.

https://tinyurl.com/bdfa586s

Regulatory News

Update on supply of tirzepatide (Mounjaro) injections

Tirzepatide (Mounjaro) has been approved in Australia for type 2 diabetes management since 2023 and chronic weight management since September 2024. A new multi-dose KwikPen presentation is now available, offering the same dosage options as existing vials. However, all strengths of Mounjaro vials will remain limited until late 2024 due to increased demand. A temporary supply of an overseas-registered KwikPen has been approved to address shortages. Patients unable to fill prescriptions should consult their doctor to reassess treatment plans. The impact of the KwikPen introduction and new weight management indication on overall Mounjaro availability is uncertain. Prescriptions for vials cannot be used for KwikPens. Patients will require new prescriptions to switch formulations.

https://tinyurl.com/4njf8kzf

Upcoming changes to the supply of some insulin products

Novo Nordisk has announced plans to discontinue several earlier-generation insulin products over the next two years as part of a global strategy unrelated to safety or efficacy concerns. The discontinuations include various presentations of Mixtard 30, Fiasp, Ryzodeg, Protaphane, Levemir, Actrapid, and NovoFine Autocover, with anticipated dates ranging from October 2024 to December 2026. In some cases, alternative presentations will remain available. The company assures ample transition time for patients to switch to alternative options. The Therapeutic Goods Administration will work with Novo Nordisk to minimise impact by providing early guidance on alternatives. Clinicians should stay informed about these changes through official alerts and database updates to ensure continuity of care for patients using affected insulin products

https://tinyurl.com/5n7m65b2

Error in new migalastat PBS listing

The recent Pharmaceutical Benefits Scheme (PBS) listing for migalastat has an omission in the clinical criteria for the initial treatment phase. It lacks a provision for confirming Fabry-related cardiac disease via late gadolinium enhancement or low T1 on cardiac magnetic resonance imaging. This will be addressed in the next PBS update. However, this oversight will not disrupt treatment for existing patients or delay initiation for new patients. Clinicians can continue prescribing migalastat confidently, adhering to the established diagnosis of Fabry disease and the presence of a migalastat-amenable GLA gene variant.

https://tinyurl.com/5cjjyujw

Release of Stage 3 for 60-day prescriptions

The final phase of the 60-day prescription implementation commenced on 1 September, 2024, marking a significant expansion in medication access for patients with stable chronic conditions. This third stage encompasses 264 medicines, representing 766 PBS items when accounting for various strengths and formulations.

Clinicians retain complete discretion over prescribing quantities, allowing for tailored patient care. While this change offers potential cost savings and convenience for patients, it necessitates vigilance in medication management. Healthcare providers should implement robust recall and review systems to ensure regular patient assessments, particularly for conditions like asthma, where ongoing monitoring is crucial.

https://tinyurl.com/mttzwkce

Pathology forms have been updated

Clinicians must start using new pathology forms on 31 October 2024. The grace period for using old pathology application forms and submitting separate ad hoc update requests ends on 31 October 2024.

https://tinyurl.com/5n6v7n2d

November 2024 PBAC meeting agenda

The Pharmaceutical Benefits Advisory Committee (PBAC) will review the following submissions as part of its November 2024 meeting:

- Besins Healthcare Australia is seeking unrestricted benefit listings for three menopausal hormone therapy products: a combination pack of oestradiol transdermal gel and progesterone capsules, oestradiol transdermal gel alone, and progesterone capsules.
- Cortex Health is requesting a new pack size listing for PKU Build 10, a glycomacropeptide and essential amino acid powder for managing phenylketonuria. Orpharma seeks a listing for PKU Easy Microtabs Plus, a new product for managing phenylketonuria.
- Mundipharma is proposing a modified injection device for their existing leuprorelin listings.
- Novo Nordisk aims to list a new strength of semaglutide (Ozempic) for type 2 diabetes mellitus (T2DM) treatment. Eli Lilly is resubmitting tirzepatide (Mounjaro) for T2DM treatment in specific patient populations.
- Sandoz is requesting listings for denosumab biosimilars (Jubbonti and Wyost) under the same conditions as their reference biologics for osteoporosis, giant cell tumour of bone, and bone metastases.

The PBAC will consider clinical trial data, community submissions, and pricing information before making recommendations to the Federal Government, which will make the final decision on implementation.

https://tinyurl.com/5n8hz9pw

Regulatory News

Upcoming changes to MBS chronic disease management arrangements

Changes to the Medicare Benefits Schedule items for chronic disease management have been deferred from 1 November 2024 until 1 July 2025. The additional time will support all practices and providers, including GPs and allied health providers, in preparing for the changes to these important services.

https://tinyurl.com/253s3wpb

News in Brief

Redefining ITT cortisol thresholds to prevent adrenal insufficiency misdiagnosis

A recent study demonstrated that lowering the cortisol cut-off for insulin tolerance tests (ITTs) from 500 to 416 nmol/L on Abbott platforms maintains 100% sensitivity while improving specificity from 43.6% to 86.7% in diagnosing adrenal insufficiency. This change reduces false positives by 76.5%, preventing unnecessary glucocorticoid replacement therapy. The authors recommend updating assay-specific cortisol cut-offs to avoid misdiagnosis in the era of more specific immunoassays. It should be noted that this ITT testing is for secondary adrenal insufficiency (hypothalamic pituitary disorders of ACTH secretion) not primary adrenal insufficiency (Addisons disease), which is diagnosed by a Short Synacthen Test.

https://tinyurl.com/56dh92u8

Positive Phase II results for batoclimab in uncontrolled Graves' disease

Once-a-week high-dose batoclimab achieved a 76% response rate and 56% antithyroid drugs (ATDs)-free response rate at week 12 in adults with Graves' disease who are intolerant to, uncontrolled on or relapsed after ATDs. There was a strong correlation between immunoglobulin lowering and clinical outcomes.

https://tinyurl.com/nkcrvte3

COVID-19 Resources

Australian Diabetes Educators Association
International Diabetes Federation
American Diabetes Association

Conferences, Workshops, and CPD

Please click on the links below for upcoming local and international endocrinology meetings, workshops, and CPD.

Australian Diabetes Society – Events

Endocrine Society of Australia – Meetings

Society for Endocrinology – World Events

Research Review Publications

Diabetes Research Review with Prof Mathis Grossmann

Endocrinology Research Review with Prof Cres Eastman, Prof Duncan Topliss, and Clinical Assoc Prof Michael Hooper

Earn CPD

CPD Home. Subscribers can claim the time spent reading and evaluating research reviews as an Educational Activity: Professional Reading in the CPD Tracker. Please Contact Us for support.

Follow us at: