Latest news: JBDS-IP guidelines, sepsis, finerenone, paediatric type 2 diabetes and a new pre-filled glucagon pen

Stay abreast of the latest news that could impact diabetes nursing.

JBDS-IP publish a raft of guideline updates

The Joint British Diabetes Societies for Inpatient Care (JBDS-IP) have published a number of updated guidelines to support the care of inpatients with diabetes. Published in January and February, the updates include the following.

Pregnancy

The updated *Managing diabetes and hyperglycaemia during labour and birth* guideline advises on the management of type 1, type 2 or gestational diabetes in women who are admitted to obstetric wards. It covers circumstances when the patients may be under the joint care of anaesthetists and obstetricians during labour and where less stringent targets may be used.

The guideline offers two approaches to glycaemic management – the traditional, NICE-advocated approach with tight glycaemic targets (4.0–7.0 mmol/L); and an updated pragmatic approach (5.0–8.0 mmol/L) to reduce the risk of maternal hypoglycaemia whilst keeping blood glucose at safe levels. This approach may be more appropriate for women vulnerable to hypoglycaemia, those on multiple infusion pumps for different medications during delivery, and those undergoing regional analgesia or general anaesthesia. It should also allow for more women to self-manage their blood glucose and avoid being admitted for variable-rate intravenous insulin infusion (VRIII).

Other advice concerns blood glucose monitoring; use of insulin pumps or closed-loop systems during labour; use of VRIII; glucose targets and use of continuous glucose monitoring in women who are administered steroids; postnatal medications; and postnatal insulin dosing/carbohydrate intake, particularly when breastfeeding.

The guideline is recommended for all medical and nursing staff and allied healthcare professionals looking after pregnant women during delivery, including members of the hospital diabetes specialist team.

Click here to read the guidance in full.

Hyperosmolar hyperglycaemic state

The Management of hyperosmolar hyperglycaemic state (HHS) in adults has been significantly updated and now includes a formal definition of resolution of HHS, new audit standards and new pathways, as well as updated resources such as bedside monitoring charts. Mention is made of COVID-19 as a cause of HHS; however, this does not change how the HHS is managed.

The document emphasises that because more children and young people are being diagnosed with type 2 diabetes, and also presenting with HHS, there is a separate guideline for those under 18 years of age who are managed by paediatric teams; however, for young adults aged 16–18 years who are already managed by the adult diabetes team, the updated JBDS-IP guidance should be followed.

According to the guidance, HHS is a medical emergency. Although similar to the other hyperglycaemic emergency, diabetic ketoacidosis, it occurs much less frequently and its treatment requires a different approach. HHS usually affects those with pre-existing type 2 diabetes but may sometimes be the first presentation of this condition. It typically occurs in people aged over 45 years but can also affect younger adults and teenagers. HHS often develops over several days, and consequently the dehydration and metabolic disturbances are more extreme. The predominant cause is usually a chest or urinary tract infection.

Click here to read the guidance in full.

Discharge planning

The *Discharge planning for adult inpatients with diabetes* guidance complements the 2021 Department of Health and Social care guidelines on hospital discharge services by emphasising the specific steps and assessments required for people living with diabetes.

Key changes include new classifications of discharges to reflect the government-recommended Discharge to Assess model. This model identifies four patient pathways, including simple discharge, support to recover at home, rehabilitation or short-term care, and ongoing 24-hour nursing care.

A section on special circumstances, including multiple diabetes-related admissions, steroid therapy, SGLT2 inhibitors, COVID-19, adult illiteracy and diabetes technologies, has also been added, and there are new appendices that include general information on frailty.

Click here to access the guideline in full.

Launch of UK's first pre-filled glucagon pen

A new pre-filled device for administration of glucagon to treat severe hypoglycaemia is now available for prescription in the UK. Ogluo® is the first ready-to-use, pre-mixed

and pre-measured liquid glucagon injection for the treatment of severe hypoglycaemia in adults, adolescents and children aged 2 years and over.

Previously there was no stable formulation of glucagon, with emergency glucagon treatment kits limited by the need to reconstitute the dried powder with water before use, as the solution would only be stable for 24 hours. In contrast to the eight-step process required to prepare and inject an emergency glucagon kit, Ogluo has a simpler two-stage injection process, is portable and ready-to-use, and can be stored for up to 27 months.

Ogluo is available in pre-filled pens and pre-filled syringes, each containing 0.5 mg or 1 mg of glucagon. It is injected subcutaneously into the lower abdomen, thigh or upper arm. The recommended dose for adults and those weighing at least 25 kg is 1 mg, and for children weighing up to 25 kg the dose is 0.5 mg. The person and those in close daily contact with them should know how to recognise signs of hypoglycaemia and they should be able to follow instructions in the package leaflet on how to inject Ogluo quickly when needed. The person must receive medical help right away after injection.

More information can be found from the manufacturer here.

Glycaemic control and risk of sepsis

A study into the relationship between HbA_{1c} and sepsis in people with type 2 diabetes reveals a U-shaped association, with an HbA_{1c} of around 53 mmol/mol (7.0%) having the lowest risk.

The study included 502 871 individuals with type 2 diabetes recorded in the Swedish National Diabetes Register, of whom 14 534 (2.9%) developed sepsis between 1 January 2005 and 31 December 2015. Sepsis risk was highest in people with an HbA_{1c} >82 mmol/mol (9.7%), with a hazard ratio (HR) of 1.52 compared to those with an HbA_{1c} of 48–52 mmol/mol (6.5–6.9%), with 5–15% increases in risk among those with HbA_{1c} between 63 and 82 mmol/mol.

However, those with an HbA_{1c} <43 mmol/mol (6.1%) also had an increased risk (HR, 1.15). Modelling suggested that people with extremely low HbA_{1c} (<35 mmol/mol) were at higher risk still.

Unsurprisingly, risk of death was significantly higher in people who developed sepsis than in those who did not (HR, 4.16).

Clinicians should thus be aware that both very high and very low HbA_{1c} are independent risk factors for sepsis. Additional investigations of factors that may affect HbA_{1c} are needed to understand the nature of this association.

Click here to read the study in full.

ACDC releases national guideline on type 2 diabetes in children and young people

The Association of Children's Diabetes Clinicians (ACDC) has published new guidance on the management of type 2 diabetes in children and young people (CYP) aged under 18 years. The advice includes key recommendations on diagnosis, glucose monitoring, weight loss and physical activity, screening for complications, diabetes medications (including metformin, liraglutide and insulin) and other medications (including blood pressure and lipid control).

CYP with type 2 diabetes are likely to have complex needs, including obesity and other comorbidities, deprivation, and high physical and mental health burden within the family. Furthermore, a limited evidence base and lack of clinical expertise in both primary and secondary care make the management of type 2 diabetes in this age group challenging. As the number of CYP with the condition looks set to grow, strong relationships and joint working between primary care, adult diabetes specialists and paediatric diabetes teams are likely to be needed to support this population effectively.

The guideline is available here, while an executive summary is available here.

Finerenone receives positive EMA opinion for treatment of CKD in type 2 diabetes

The EMA's Committee for Medicinal Products for Human Use (CHMP) has recommended the granting of marketing authorisation for finerenone (trade name Kerendia), a non-steroidal selective mineralocorticoid receptor antagonist (MRA), for the treatment of chronic kidney disease (CKD; stage 3 and 4 with albuminuria) associated with type 2 diabetes in adults.

Finerenone, when added to standard care (including an ACE inhibitor or ARB), has previously been shown to reduce the risk of CKD progression and cardiovascular events (see summaries in *Diabetes Distilled* here and here). The most common side effects are hyperkalaemia, decreased eGFR and hypotension.

Positive CHMP opinions are typically followed by EMA marketing authorisation within around 2 months. Assuming finerenone receives approval, it is set to add a new (potentially synergistic, given the differing drug mechanisms) treatment option for CKD in addition to ACE inhibitors/ARBs and SGLT2 inhibitors.

Click here to read the opinion in full. ■

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