Latest news: Life-saving NICE guidance, optimising tirzepatide benefits and reducing GDM risk

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

Guideline change could save thousands more lives a year

A new study suggests that the wider use of SGLT2 inhibitors could save thousands of lives annually. Using primary care data, investigators demonstrated the mortality benefit of empagliflozin in people with type 2 diabetes in routine care. Previously, this effect had only been recorded in trial participants who met strict inclusion criteria.

Since 2022, NICE has recommended metformin and SGLT2 inhibitors as first-line treatment for many people with type 2 diabetes, including those at high risk of cardiovascular disease. This guidance was extrapolated from evidence from randomised controlled trials, such as EMPA-REG, which demonstrated that SGLT2 inhibitors have significant cardioprotective and mortality benefits. However, evidence from broader populations has been lacking.

Using a trial emulation based on EMPA-REG, researchers used UK primary care records to explore the effect of empagliflozin in a more clinically relevant population. The study included a total of 62 503 adults with type 2 diabetes initiating empagliflozin or a DPP-4 inhibitor (as control) between 1 January 2014 and 31 December 2022. Notably, 83.2% of those prescribed empagliflozin would not have met the EMPA-REG eligibility criteria.

During a median follow-up of 3.1 years, all-cause mortality was 24% less likely in those prescribed empagliflozin than those in the control group. This equates to one life being saved for every 47 people treated with empagliflozin over 3 years. With an estimated 3 million people receiving treatment for type 2 diabetes in the UK, the findings suggest that around 20 000 deaths could be prevented each year.

The investigators, from University College London and the London School of Hygiene and Tropical Medicine, conclude that their findings support the proposed NICE guidance to broaden the use of SGLT2 inhibitors in the management of type 2 diabetes.

The full study, published in *BMJ Open Diabetes Research & Care,* can be read here.

Holistic treatment of OSA and obesity key to optimising cardiometabolic benefits of tirzepatide

Follow-up analyses of data from the SURMOUNT-OSA trial indicate that tirzepatide may reduce cardiometabolic risk by treating both obstructive sleep apnoea (OSA) and obesity. The researchers evaluated the impact of weight loss alone, reduction in OSA severity alone and the combination of the two.

OSA is a common disorder in which breathing repeatedly stops and starts during sleep because throat muscles relax and block the upper airway. As well as resulting in daytime tiredness and problems with concentration, OSA can have major cardiometabolic consequences. It associated with obesity, and weight reduction can notably improve OSA severity.

Continuous positive airway pressure (CPAP) has been first-line therapy for OSA but is often poorly tolerated. As weight reduction yields notable OSA improvements in those who are obese, interest in tirzepatide as a treatment has grown owing to its effects on weight loss.

The SURMOUNT-OSA programme demonstrated that tirzepatide was superior to placebo in reducing OSA severity, both in CPAP users and non-users. Among participants with moderate-to-severe OSA and obesity, tirzepatide significantly reduced various cardiometabolic risk factors, including inflammation, prediabetes and triglycerides.

The secondary analyses sought to understand the drivers of these improvements by analysing the impact of weight loss alone, of changes in OSA severity alone and the combination of the two. While weight loss alone had marked effects, the benefits of combined weight loss and improvements in OSA were superior.

The findings support the idea that treating OSA and obesity in individuals with both conditions is required to optimise cardiometabolic benefits. In clinical practice, the treatment of OSA in people with obesity should include obesity management, with weight-loss therapies such as tirzepatide representing a potential option.

The full study, published in *Nature Medicine*, can be read here.

Lifestyle interventions in pregnancy reduce gestational diabetes risk

Researchers at the University of Liverpool have led a study that has established that lifestyle interventions provide significant benefits in reducing the risk of gestational diabetes (GDM). The study, the largest to date, showed that physical activity-based interventions are the most effective.

Characterised by glucose intolerance first diagnosed in pregnancy, GDM poses substantial risks to mother and baby, including an increased risk of stillbirths, pre-term births and pre-eclampsia. In the long term, it predisposes the mother and her offspring to obesity, type 2 diabetes and cardiovascular complications.

Robust evidence to guide recommendations on the preferred type of lifestyle intervention to prevent GDM has been lacking, despite its rising incidence worldwide. A team of global collaborators set out to address this.

A meta-analysis of 104 randomised trials on the effects of lifestyle interventions (physical activity, diet or mixed) in pregnancy, involving nearly 36 000 women, was conducted. It assessed whether such interventions prevent GDM, for whom they work best and which components provide the greatest benefit.

The study concluded that:

- Lifestyle interventions in pregnancy are likely to prevent GDM.
- Physical activity-based interventions, such as walking, aerobic and strength training, and swimming, were most effective.
- Interventions delivered in group formats and by newly trained providers enhanced effectiveness.

The effects did not vary across maternal characteristics like BMI, age and ethnicity, but varied by educational levels, where women from lower education backgrounds benefited less. The authors suggest that future interventions should focus on ways to prevent GDM in this high-risk group, and that tailored approaches are needed to address inequities in access and engagement.

The full study, published in *The BMJ*, can be read here.

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