

and their metabolites, which provided very low quality evidence on all the outcomes of interest. Up to date evidence monitoring identified seven studies reporting on all-cause mortality and intensive care unit admission, eight studies reporting on length of hospital stay, and six studies reporting on adverse events. The living evidence synthesis has been updated twice. At the time of the conference, we will report on 10 months of monitoring results and any substantial updates to the HTA report.

**Conclusions:** For HTA reports based on low and very low quality evidence (uncertain results), the living evidence approach allows for timely updating of conclusions. The LE-IHD framework facilitates the planning and execution of living evidence syntheses to inform health decisions. This living evidence synthesis is being developed as part of a project to strengthen decision-making capacity in the Spanish health system.

## PD52 Evidence Review Of Universal Ultrasound Screening For Developmental Dysplasia Of The Hip In Infants

Arielle Maher ([amaher@hiqa.ie](mailto:amaher@hiqa.ie)), Karen Jordan, Eanan Finnegan, Susan Spillane, Michelle O' Neill and Máirín Ryan

**Introduction:** Developmental dysplasia of the hip (DDH) is a congenital disease in which there is abnormal development of the hip in infancy. Ultrasound screening has the potential to enable earlier identification and diagnosis of DDH, facilitating earlier and less invasive treatment. Ultrasound screening programs can be selective or universal, but the optimal method is unclear.

**Methods:** The aim of this review was to examine the comparative effectiveness of universal and selective ultrasound screening for DDH in infants. The domains of the Health Technology Assessment Core Model® selected for assessment were consistent with a rapid relative effectiveness assessment approach (i.e., focusing on the clinical benefit of the intervention) and included the following: (i) the health problem; (ii) a description of the technology; and (iii) clinical effectiveness and safety outcomes. An expert advisory group comprising nominated representatives from key stakeholder groups was convened for the purposes of quality assurance and to assist in interpreting the evidence.

**Results:** DDH severity can range from mild dysplasia to complete dislocation, with incidence varying internationally. Ultrasound screening can result in unnecessary treatment given the potential for spontaneous correction of hip instability. Furthermore, treatment may give rise to complications. Appropriate governance of a screening program and associated training may reduce the risk of unnecessary treatment. Limited high quality evidence from four studies was identified. This evidence suggested that increased rates of non-surgical intervention were associated with universal ultrasound screening, compared with selective screening, without a

corresponding reduction in the incidence of late DDH or requirement for surgical intervention.

**Conclusions:** The relative benefit of universal ultrasound screening, compared with selective screening, remains unclear. Screening all infants has the potential to lead to unnecessary treatment, with the risk of clinically significant consequences. Consideration could be given to implementing a selective ultrasound screening program, with appropriate governance, end-to-end care, quality assurance, and outcome monitoring.

## PD54 Impact Of Experiencing Vaso-Occlusive Crisis In Patients With Sickle Cell Disease: Systematic Review And Meta-Analysis Of Prognostic Studies

Bruna Ascef, Mariana Oliveira Marques, Diego Kashiura, Juliano Bertinato and Haliton Alves De Oliveira Jr ([haliton.oliveira@haoc.com.br](mailto:haliton.oliveira@haoc.com.br))

**Introduction:** Sickle cell disease (SCD) is characterized by recurrent painful ischemic vaso-occlusive episodes (VOEs). Acute episodes of pain, often termed sickle cell pain crises or vaso-occlusive crises (VOCs), are one of the most common and debilitating manifestations of SCD. Here we present a systematic review of 31 trials of 202,758 patients with SCD.

**Methods:** This study followed the guidelines of Riley et al. for conducting a systematic review and meta-analysis of prognostic factor studies and was reported according to PRISMA guidelines. Literature searches were conducted in the PubMed, Embase, and LILACS databases. The websites of the Annual Academy for Sickle Cell and Thalassemia Conferences, the European Hematology Association, and the American Society of Hematology were also searched. Additionally, manual searches were conducted in Google Scholar, Epistemonikos, and the reference lists of included studies. The searches were performed on 22 March 2023.

**Results:** In total, 31 studies were included in this systematic review. There was considerable heterogeneity in the definition of prognostic factors of interest across the included studies. Findings revealed a link between VOCs and reduced health-related quality of life (HRQoL), severe pain, and a high rate of hospitalization. Although VOCs were related to an increased mortality risk, the mortality rate remained relatively low, with acute chest syndrome being a common cause of death. Despite the study heterogeneity, consistent evidence highlighted the impact of VOCs on SCD-related hospitalizations (pooled hospitalization rate due to VOEs of 47%, 95% confidence Interval: 33, 61; 16 studies, 139,752 participants).

**Conclusions:** This study suggests that VOCs reduce HRQoL, cause severe pain, and lead to high rates of hospitalization in patients with SCD. Furthermore, VOEs were related to an increased mortality risk. Future research should prioritize more well-designed comparative

prospective studies and standardization of the definition of VOCs. A better understanding of VOCs as a prognostic factor could enhance HRQoL, alleviate healthcare system burden, and inform more effective interventions for patients with SCD.

## PD55 Living Recommendations Within A Type 2 Diabetes Mellitus Guideline

Soledad Isern De Val ([msisern.iacs@aragon.es](mailto:msisern.iacs@aragon.es)) and Patricia Gavin Benavent

**Introduction:** The Institute for Health Sciences of Aragon (IACS) has coordinated the development of a clinical practice guideline (CPG), funded by the Spanish Ministry of Health, for managing antidiabetic drugs in patients with type 2 diabetes mellitus. We conducted a living systematic review to provide a continuously updated evidence summary for formulating living recommendations on intensifying basal insulin therapy by comparing glucagon-like peptide-1 (GLP-1) receptor agonists with rapid-acting insulin.

**Methods:** In 2021, the IACS joined the Living Evidence to Inform Health Decisions (LE-IHD) project, which includes the use of technological tools to identify early emerging evidence on a defined topic. We conducted searches in the centralized Living Overview of Evidence (LOVE) and Epistemonikos databases. Specifically, the LOVE topic of interest from which the articles were selected was "glucagon-like peptide analogs and agonists for diabetes mellitus". We applied the GRADE approach to rate the certainty of evidence and to develop clinical practice recommendations.

**Results:** The initial baseline report included six randomized controlled trials (RCTs). We have continuously monitored the evidence and performed a monthly screening. Only one RCT was identified in the first update. The Guideline Development Group (GDG) decided to formulate a strong recommendation in favor of GLP-1 receptor agonists. The GDG considered the reduction in the risk of severe hypoglycemia events among patients treated with GLP-1 receptor agonists, compared with rapid insulin, particularly significant as well as the greater improvement in patient quality of life. Since the guideline was formulated, no new evidence has been identified that would change the recommendation.

**Conclusions:** Adoption of the living systematic approach underscores the commitment to providing continuously updated recommendations within CPGs. Utilizing the GRADE approach, the Guideline Development Group decided to formulate a strong recommendation in favor of GLP-1 receptor agonists over rapid insulin. No new evidence has emerged to alter this recommendation. The living systematic review will remain active, ensuring continuous monitoring until the final draft CPG is disseminated.

## PD56 Long-Term Use Of Lisdexamfetamine For Attention-Deficit/Hyperactivity Disorder: What Does The Evidence Say?

Maíra Catharina Ramos ([mairacramos@gmail.com](mailto:mairacramos@gmail.com)) and Flávia Tavares Silva Elias

**Introduction:** Attention-deficit/hyperactivity disorder (ADHD) is a neuropsychiatric disorder that can interfere with school and academic life, work, and even personal relationships. One of the alternative medications is lisdexamfetamine (LDX), a prodrug amphetamine preparation that lasts an average of 13 hours due to its gradual conversion. Since LDX is used continuously, it is necessary to evaluate its long-term efficacy and safety.

**Methods:** A rapid health technology assessment (HTA) was performed. Searches were conducted in the PubMed, Embase, Web of Science, and Cochrane Library databases using descriptors and their respective synonyms to identify studies on the long-term efficacy and safety of LDX in people with ADHD. Interventional and control group studies with a follow-up period of more than five weeks were included. Secondary studies were excluded. The reference lists of included studies were screened to identify potentially eligible publications that were not found in the database searches. Study selection was carried out in two stages, with screening of titles and abstracts and then assessment of full-text articles for eligibility.

**Results:** This rapid HTA included 32 studies. The population included patients aged five to 55 years, and the longest follow-up was 108 weeks. In general, the literature reported a decrease in symptoms in the first five to six weeks of treatment, stabilizing thereafter. After 108 weeks, the mean change in ADHD Rating Scale-IV hyperactivity/impulsivity was -25.8 (95% confidence interval [CI]: -27.0, -24.5;  $p < 0.001$ ) and -13.1 (95% CI: -13.8, -12.4;  $p < 0.001$ ) for the ADHD Rating Scale-IV inattention subscale. However, psychiatric disorder system organ class adverse events were frequent, including irritability, anxiety, and aggression, in addition to suicide attempts in severe cases.

**Conclusions:** It appears that long-term use of LDX has been associated with good clinical results in the treatment of ADHD, with treatment effectiveness remaining stable during the time observed (two-year follow-up). However, adverse events, especially psychiatric disorders, require attention as they can be confused with symptoms of the disease.