

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

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**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<sup>®</sup> 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

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**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