**Pre-eclampsia** is a pregnancy complication affecting both mother and fetus. It is typically characterized by new-onset hypertension and proteinuria after 20 weeks of gestation. The pathogenesis of pre-eclampsia is not well understood and the only treatment proven to be effective is delivery. Worldwide, around 3-5% of pregnant women are affected. In developing regions, pre-eclampsia is a leading cause of perinatal death and one of the leading causes of maternal death. In the industrialized world pre-eclampsia causes around 13% of maternal deaths and is responsible for the majority of iatrogenic preterm births.

Although there is no proven effective method to prevent pre-eclampsia, early identification of women at risk of pre-eclampsia could enhance appropriate application of antenatal care, management and treatment. At present, pre-eclampsia screening consists of assessing clinical risk factors such as age, body mass index (BMI), and family history, in combination with an ultrasound scan at 20 weeks. However, the predictive power of this type of clinical screening is modest. Recently, several maternal serum markers have been assessed as novel candidates for predicting pre-eclampsia. Very little is known about the cost-effectiveness of these and other tests for pre-eclampsia, mainly because there is no clear treatment path.

The aim of this study was to provide a comprehensive overview of the existing evidence on the health economics of screening, diagnosis, and treatment options in preeclampsia.

**Methods**

Three electronic databases (PubMed, EMBASE and The Cochrane Library) were examined to investigate the eligible studies on screening, diagnosis, treatment or prevention of pre-eclampsia published between 1994 and 2014. Search terms for all databases were: (pre-eclampsia OR 'pre eclampsia') AND (screening OR diagnosis*) AND (prevent* OR intervention) AND (treatment OR manage*) AND ('cost of illness' OR 'cost analysis' OR 'cost effectiveness' OR 'cost benefit' OR 'cost utility' OR 'economic evaluation' OR 'economic analysis' OR 'budget impact'). We only included studies in humans and studies written in English.

After initial selection based on title and abstract, the full text of the paper was screened. Only complete economic assessments in pre-eclampsia, classified as economic evaluation and/or budget impact analysis (BIA) were included. Additionally, economic evaluation was categorized into cost analysis (CA), cost-effectiveness analysis (CEA), cost-utility analysis (CUA), or cost-benefit analysis (CBA). Irretrievable references, poster presentations and meeting abstracts were excluded. For comparability of results across studies, all costs reported in the included papers were set to 2012 US dollar values by using purchasing power parities (PPPs).

**Conclusion**

The two studies on magnesium sulphate are equivocal on the cost-effectiveness in non-severe cases of pre-eclampsia. Novel biomarkers in screening for and diagnosing pre-eclampsia show promise, but their accuracy is a major driver of cost-effectiveness. Universal screening for pre-eclampsia using a biomarker will probably only be feasible when accuracy is significantly increased.