

motivated employees, companies should benefit from lower absenteeism and increased productivity. The public sector expects savings in health care costs, an increase in the employment rate and avoidance of early retirement. Employees benefit from improving their health and well-being. The aim of the study is to investigate whether there is empirical economic evidence for the benefit of workplace health promotion.

#### **METHODS:**

Systematic literature search in electronic databases and handsearch for systematic reviews, meta-analyses and economic studies with predefined inclusion and exclusion criteria.

#### **RESULTS:**

Literature search provided two meta-analyses (with 84 primary studies), three systematic reviews (with 36 primary studies) and one model calculation (with 6 primary studies). There are relatively few empirical studies available to prove the economic benefit, often with inadequate methodological quality. Most of them are conducted in the United States of America. Only a few are from Europe, and those are mainly from Scandinavia. The available studies show a positive return on investment for companies however with a width range. Benefits for the health and social services have also been proven in a model calculation.

#### **CONCLUSIONS:**

The positive results must be interpreted with caution. Firstly, there is a lack of good primary studies on the effectiveness of measures on which economic analyses could be based; secondly, the methodological quality and comparability of economic analyses can still be improved and thirdly, the transferability of the results is often limited due to differences in health care systems.

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## **PD16 Riociguat In Pulmonary Arterial Hypertension: A Systematic Review**

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#### **INTRODUCTION:**

Pulmonary Hypertension is a silent disease and its diagnosis often occurs when it is already at an advanced stage. Pharmacological treatment of Pulmonary Arterial Hypertension (PAH) can be performed with: calcium channel blockers; phosphodiesterase-5 inhibitors; prostanoids; endothelin-receptor antagonists; and, soluble guanylate cyclase stimulators. The use of Riociguat was approved in Brazil by the National Sanitary Surveillance Agency on October 5, 2015 for use in patients with PAH. The objective was to perform a systematic review (SR) of the efficacy of pharmacological treatment of Pulmonary Arterial Hypertension comparing Riociguat with other available medications or with placebo.

#### **METHODS:**

Following the steps described in the PRISMA guideline, a search for randomized controlled clinical trials was conducted, in which Riociguat was used alone or in combination with other therapies, in databases MEDLINE, LILACS, Web of Science, Science Direct, Cochrane Library Wiley and in the gray literature (Google Scholar, Capes Bank of Theses and Clinical Trials). EndNote and Mendeley were used as reference managers. Outcomes analyzed were: death; six-minute walk distance (6MWD); World Health Organization (WHO) functional class (improvement, stabilization or worsening); hemodynamic variables (pulmonary vascular resistance, cardiac index and pulmonary-artery pressure); clinical worsening; hospitalization; and, quality of life.

#### **RESULTS:**

Four hundred and sixty-seven articles were obtained which reduced to 379 after the duplicated articles were removed. After exclusion by title and abstract by two independent reviewers, forty-seven studies remained. Through the gray literature, six studies were obtained, resulting in fifty-three articles being retrieved for full-text review. Five studies were selected to compose the SR. Compared with placebo, Riociguat showed improvements in 6MWD, pulmonary vascular resistance, WHO functional class and time to clinical worsening. Efficacy was maintained after one year of use. Subgroup analysis was performed comparing of treatment-naive patients and patients on background PAH-targeted therapy.

#### **CONCLUSIONS:**

This work may be used as a management and decision support tool, based on the same methodology of a Health Technology Assessment, and may contribute to

quality decisions to be taken in relation to the incorporation of new technology.

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## PD18 Cost-Effectiveness Of Extracorporeal Life Support In Cardiogenic Shock

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### INTRODUCTION:

Venoarterial extracorporeal life support (ECLS) is increasingly used in patients during cardiogenic shock, due to favorable results in this very high-risk scenario. However, it is a costly intervention that requires heavy financial investment and specialized human resources.

### METHODS:

Cost-effectiveness analysis to evaluate ECLS in the perspective of the Brazilian public health system (SUS) in the population of adult patients with cardiogenic shock. A decision tree comparing ECLS and usual care was built, using efficacy data from a systematic review of literature, and cost data from SUS reimbursement values. Impact of parameter variability and uncertainty were ascertained with deterministic and probabilistic sensitivity analysis.

### RESULTS:

Usual care resulted in thirty percent probability of survival, at an average cost of 3,000 international dollars (Int\$/USD); the strategy that includes ECLS resulted in sixty-two percent survival rate, and average cost of Int\$ 23,000, with incremental cost-effectiveness ratio (ICER) of Int\$ 62.215 per averted in-hospital death. Results were sensitive to device cost, and survival difference between strategies. In probabilistic sensitivity analysis, ECLS was consistently more costly and more effective than usual care; based on a willingness-to-pay of three times Brazilian gross domestic product (GDP) per capita (Int\$ 45,000), there was twenty-seven percent probability of ECLS being cost-effective.

### CONCLUSIONS:

ECLS has the potential to increase survival for cardiogenic shock, but would significantly increase costs. In the

Brazilian public health system, the cost per averted in-hospital death is 4.1 times the domestic GDP per capita.

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## PD20 'Where's Waldo?' Incorporating Patient Aspects Into Rapid Reviews

### AUTHORS:

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### INTRODUCTION:

Patient and social aspects form a key domain within health technology assessments (HTAs) but are less well established in rapid HTA. Patient aspects can add value to HTAs by aiding in interpretation of variations in intervention effectiveness or providing context on the impact of interventions on patients' lives. This poster describes initial experience of incorporating patient aspects into a rapid HTA for the Scottish National Health Service.

### METHODS:

A rapid review explored using qualitative literature to understand patient issues relating to transoral robotic surgery (TORS) for head and neck cancer. Literature searches identified qualitative studies or systematic reviews of qualitative studies using two search filters: one for patient perspectives and another for qualitative study designs.

### RESULTS:

No qualitative literature specific to the exact question posed in the HTA was identified. Instead the project focused on patient experiences of alternative treatments (radiotherapy or open surgery) and identifying patient-important outcomes, such as speech function or lack of facial disfigurement. Pragmatic decisions on study selection were required in the TORS review due to the large volume of literature identified: we only included the most recent studies and limited our selection to patients with specific forms of head and neck cancer. Selecting studies from a large volume of literature may be an issue for future rapid HTAs attempting to incorporate qualitative evidence. The qualitative studies were summarised and used to inform advice issued to NHSScotland by the Scottish Health Technologies Group (SHTG).