INPLASY PROTOCOL

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Efficacy of EWINDOW for prevention of delirium at intensive care units: A protocol for systematic review and meta-analysis

Liu, J[1]; Wang, J[2].

Review question / Objective: To comprehensively investigate all RCTs to assess the efficacy of EWINDOW in preventing delirium in critically ill patients.

Condition being studied: EWINDOW is a brand new lighting product, which patented design integrates a 3D simulated sky scene, synchronized to the patterns of natural sunlight throughout the day, adjusting for seasons, latitude and ambient light conditions to emulate an exterior window. It perfectly integrates the latest light emitting diode (LED) technology, optical design and intelligent control systems. Special LEDs are used to light up the sky and clouds, then transform them into a translucent 3D image, so the performance of the EWINDOW simulates a real sky and clouds. Settings are easily adjusted using a wall mounted control panel, smartphone app or digital addressable lighting interface controls. The previous study has proved that multi-component non-pharmacologic interventions included simulated natural sunlight during the day (similar with EWINDOW) could reduce the incidence of delirium, but other studies have shown no effect on either delirium incidence or ICU length of stay.

INTRODUCTION

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METHODS

Participant or population: Critical care patients.

Intervention: EWINDOW.

Comparator: Usual care.

Study designs to be included: RCTs

Eligibility criteria: RCTs that are connected to the use of EWINDOW and are important to the prevention of delirium in critical situations, with no constraints on publication status or language.

Information sources: Electronic databases.

Main outcome(s): Delirium incidence and duration.

Quality assessment / Risk of bias analysis: Cochrane Risk of Bias Tool.

Strategy of data synthesis: Related Stata software is used to conduct meta-analyses.

Subgroup analysis: In case significant heterogeneity is identified, subgroup analysis will be performed according to the possible sources of heterogeneity.

Sensitivity analysis: Considering that varying level of the methodological quality of trails may tend to affect our findings, sensitivity analysis will be performed to evaluate the robustness of the results by excluding high-risk studies.

Country(ies) involved: China.

Keywords: EWINDOW.

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