

# INPLASY PROTOCOL

To cite: Xu et al. Risk factors for pulmonary embolism in ICU patients: a systematic review and meta analysis. Inplasy protocol 202150105. doi: 10.37766/inplasy2021.5.0105

Received: 29 May 2021

Published: 29 May 2021

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**Support:** Health Commission of Zhejiang.

**Review Stage at time of this submission:** Piloting of the study selection process.

**Conflicts of interest:**  
None declared.

## Risk factors for pulmonary embolism in ICU patients: a systematic review and meta analysis

Xu, X<sup>1</sup>; Meng, J<sup>2</sup>; Dai, R<sup>3</sup>; Ji, C<sup>4</sup>.

**Review question / Objective:** What are the risk factors of pulmonary embolism in ICU patients? How high are the risks?  
**Condition being studied:** Pulmonary embolism: often occurs in patients with venous thrombosis, long-term bed rest, and surgery, etc.

**Eligibility criteria:** Eligibility criteria for the review are based on the PICOS framework. We will include studies that meet the following criteria: (1) Patients diagnosed with pulmonary embolism; (2) Predictors and prognostic factors; (3) Cohort study and case control study

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 29 May 2021 and was last updated on 29 May 2021 (registration number INPLASY202150105).

### INTRODUCTION

**Review question / Objective:** What are the risk factors of pulmonary embolism in ICU patients? How high are the risks?

**Condition being studied:** Pulmonary embolism: often occurs in patients with

venous thrombosis, long-term bed rest, and surgery, etc.

### METHODS

**Participant or population:** Patients in ICU.

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**Intervention:** Risk factors: venous thrombosis, long-term bed rest, and surgery, etc.

**Comparator:** Without these risk factors.

**Study designs to be included:** Cohort study or case control study.

**Eligibility criteria:** Eligibility criteria for the review are based on the PICOS framework. We will include studies that meet the following criteria: (1) Patients diagnosed with pulmonary embolism; (2) Predictors and prognostic factors; (3) Cohort study and case control study.

**Information sources:** A systematic search will be conducted using online electronic databases, including :PubMed, Cochrane Library, Embase, CINAHL, Web of Science, China Journal Fulltext Database(CNKI), Wanfang Database, VIP Database. Retrieval time will be from their inception until May 31, 2021.

**Main outcome(s):** Pulmonary embolism or not.

**Quality assessment / Risk of bias analysis:** Two reviewers independently evaluated the quality of the included studies according to the Newcastle-Ottawa Scale and evaluated the risk of bias and applicability of the models using the Prediction model Risk of Bias Assessment Tool.

**Strategy of data synthesis:** A meta-analysis will be summarized for the quantitative synthesis, using RevMan 5.3. The effect sizes from the meta-analysis will be presented as odds ratios(OR), or relative risks(RR), depending on the data reported by the authors.

**Subgroup analysis:** If possible, we will do some extra subgroup analyses according to the results of heterogeneity and inconsistency, such as race, region, etc.

**Sensitivity analysis:** If possible, we will do some extra Sensitivity analyses.

**Language:** English.

**Country(ies) involved:** China.

**Keywords:** Risk Factors; Pulmonary Embolism; Meta Analysis.

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