

# INPLASY PROTOCOL

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**Support:** None

**Review Stage at time of this  
submission:** The review has  
not yet started.

**Conflicts of interest:**  
None.

## Comparative efficacy of respiratory personal protective equipment against respiratory infections in healthcare workers: a network meta-analysis

Wang X<sup>1</sup>.

**Review question / Objective:** Looking for the evidence for the protective effect of respiratory personal protective equipment (RPPE) against clinical respiratory infections among healthcare workers.

**Condition being studied:** Respiratory personal protective equipment (RPPE) are particularly important to decrease the occupational risk of respiratory. RPPEs can help to protect users from large respiratory droplets. The network metaanalysis is to compare type and wearing ways of RPPEs by evaluating morbidity of infectious respiratory disease.

**Information sources:** 4 electronic databases (Cochrane Central Database and the Web of Science, PubMed and EMBASE)

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 09 April 2020 and was last updated on 09 April 2020 (registration number INPLASY202040047).

### INTRODUCTION

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## **METHODS**

**Participant or population:** Healthcare works.

**Intervention:** The RPPes were identified in the literature as, 1) N95 respirator 2) surgical mask 3) clothing mask . The methods of using RPPes in the literature will be identified as, 1) consistent wearing 2) intermittent wearing.

**Comparator:** Without wearing of RPPE.

**Study designs to be included:** Randomized control trials to assess the protective effect of RPPes.

**Eligibility criteria:** Study design: published, peer-reviewed randomized control trials; Population: Healthcare works; Intervention: any type of RPPE.

**Information sources:** 4 electronic databases(Cochrane Central Database and the Web of Science, PubMed and EMBASE).

**Main outcome(s):** Morbidity of respiratory infections.

**Additional outcome(s):** Best way of wearing RPPE.

**Quality assessment / Risk of bias analysis:** The quality and risk of bias of the included studies will assessed by cochrane collaboration's tool. Once studies were determined to fit the inclusion criteria, additional data were extracted for each study to specifically assess adequate random sequence generation, allocation concealment, subject blinding, outcome blinding, and procedures for handling incomplete data and selective reporting.

**Strategy of data synthesis:** We will conduct a Bayesian network meta-analysis using the ADDIS, statistical analysis will include:

1. Pooling the effect size for binary outcomes; 2. Network meta-analysis; 3. Assessment of consistency; 4. Assessment of heterogeneity; 5. Plot the probability of intervention ranks.

**Subgroup analysis:** None.

**Sensibility analysis:** None.

**Language:** English.

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

**Keywords:** respiratory personal protective equipment;respiratory infections; healthcare workers.