# INPLASY PROTOCOL

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

Conflicts of interest: No.

# Effect of high-quality nursing intervention on anxiety and depression in patients with chronic heart failure companied malnutrition: a protocol for systematic review and meta-analysis

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Review question / Objective: Is high-quality nursing intervention (HQNI) effective on anxiety and depression in patients with chronic heart failure companied malnutrition (CHFM)?

Condition being studied: Chronic heart failure; malnutrition; anxiety; depression.

Information sources: The following electronic databases will be sought form the respective dates to the February 29, 2020 without language and publication status restrictions: The Cochrane Library, Web of Science, MEDLINE, EMBASE, Scopus, Chinese Biomedical Literature Database, and China National Knowledge Infrastructure. All potential randomized controlled trials (RCTs) that explored the effect of HQNI on anxiety and depression in patients with CHFM will be included. Exemplary search strategy for The Cochrane Library is created. We will also modify similar search strategies for other electronic databases. In addition, we will also search other literature sources, such as Google Scholar, conference proceedings, and reference lists of related reviews.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 12 April 2020 and was last updated on 12 April 2020 (registration number INPLASY202040069).

### INTRODUCTION

Review question / Objective: Is high-quality nursing intervention (HQNI) effective on anxiety and depression in patients with chronic heart failure companied malnutrition (CHFM)?

Condition being studied: Chronic heart failure; malnutrition; anxiety; depression.

### **METHODS**

Participant or population: All CHFM participants who were diagnosed as anxiety and depression will be included in this study, in spite of country, race, gender, age, and severity of CHFM.

Intervention: In the intervention group, all patients received HQNI for the management their anxiety and depression.

Comparator: In the control group, all patients underwent any treatments with no restrictions, except any forms of HQNI.

Study designs to be included: This proposed study will include randomized controlled trials (RCTs) that examined the effect of HQNI on anxiety and depression in patients with CHFM.

Eligibility criteria: This proposed study will include RCTs that examined the effect of HQNI vs. other interventions on anxiety and depression in patients with CHFM.

Information sources: The following electronic databases will be sought form the respective dates to the February 29, 2020 without language and publication status restrictions: The Cochrane Library. Web of Science, MEDLINE, EMBASE, Scopus, Chinese Biomedical Literature Database, and China National Knowledge Infrastructure. All potential randomized controlled trials (RCTs) that explored the effect of HQNI on anxiety and depression in patients with CHFM will be included. Exemplary search strategy for The Cochrane Library is created. We will also modify similar search strategies for other electronic databases. In addition, we will also search other literature sources, such as Google Scholar, conference proceedings, and reference lists of related reviews.

Main outcome(s): Depression (measured by any scale reported in the trial, such as Geriatric Depression Scale); Anxiety (measured by any tool reported in the trial, such as Beck Anxiety Inventory).

Additional outcome(s): Nutritional status (assessed by any scale reported in the trial, such as The Malnutrition Universal Screening Tool); All-cause mortality; Urine output; Change in serum sodium; Quality of life (identified by any indexes reported in the trial, such as Physical Quality of Life Index); and Adverse events.

Data management: Two team members will separately collect data from included articles using a predefined data extraction form. Any differences will be solved through discussion with a third team member. Collected information is study characteristics (such as title, first author, year of publication, et al), participant characteristics (such as age, gender, duration and severity of CHFM, anxiety and depression, et al), sample size, study methods, study setting, details of interventions and comparators, outcomes, results, follow-up information, safety, and conflict of interest.

## Quality assessment / Risk of bias analysis:

Cochrane Collaboration Tool will be used to appraise study quality by two team members separately. If any disagreements occur between both of them, we will invite a third team member to solve them through discussion, and a consensus will be reached after discussion.

Strategy of data synthesis: We will utilize ReMan 5.3 software to pool the data and to perform data analysis and a meta-analysis if possible. Treatment effect of continuous data will be estimated as weighted mean difference or standardized mean difference and 95% confidence intervals (CIs), and that of dichotomous data will be estimated as risk ratio and 95% Cls. P50% suggests significant heterogeneity, and a randomeffects model will be carried to synthesize the data. When there is homogeneity, we will conduct a meta-analysis if sufficient data is collected from eligible trials. Otherwise, we will perform a subgroup analysis to detect possible reasons of significant heterogeneity. If there is still substantial heterogeneity after subgroup analysis, we will not carry out a metaanalysis.

Subgroup analysis: Subgroup analysis will be examined based on the variations in study and patient characteristics, and different types of treatments, controls, and outcome measurements.

Sensibility analysis: Sensitivity analysis will also be performed to test the robustness of study findings by taking away trials with high risk of bias.

Country(ies) involved: China.

Keywords: Chronic heart failure; malnutrition; anxiety; depression; high-quality nursing intervention; effect.