INPLASY PROTOCOL

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Review Stage at time of this submission: Formal screening of search results against eligibility criteria.

Conflicts of interest: None.

Definition, incidence and influencing factors of underfeeding in critically ill patients: A protocol systematic review and meta-analysis

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Review question / Objective: What is the incidence, influencing factors of underfeeding of critically ill patient? A systematic review and Meta ananlysis of underfeeing of critically ill patient with: Patients: Adult ICU survivors. Exposures: having underfeeding (Have a clear definition, Energy requirements are calculated by indirect calorimetry, equations or guidelines). Comparators: Not having underfeeding Outcomes: Any assessment within the incidence and influencing factors of underfeeding (Demographic, patient-related factors, feeding method, time to initiation of enteral nutrition, prescription by physicians, interruption of enteral nutrition and drugs) Study design: Cohort studies, case-control studies, and cross-sectional studies, Journal articles published in English from from inception to November 20, 2020.

Condition being studied: The first author of this research is a postgraduate student with a certain scientific research foundation, and the corresponding author is a postgraduate tutor with certain scientific research guidance capabilities.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 03 December 2020 and was last updated on 03 December 2020 (registration number INPLASY2020120015).

INTRODUCTION

Review question / Objective: What is the incidence, influencing factors of underfeeding of critically ill patient? A systematic review and Meta ananlysis of underfeeing of critically ill patient with:

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Condition being studied: The first author of this research is a postgraduate student with a certain scientific research foundation, and the corresponding author is a postgraduate tutor with certain scientific research guidance capabilities.

METHODS

Participant or population: Patients: Adult ICU survivors.

Intervention: Exposures: having underfeeding(Have a clear definition, Energy requirements are calculated by indirect calorimetry, equations or guidelines).

Comparator: Not having underfeeding.

Study designs to be included: Cohort studies, case-control studies, and cross-sectional studies, Journal articles published in English from from inception to November 20, 2020.

Eligibility criteria: Inclusion criteria Patients: Adult ICU survivors. Exposures: having underfeeding(Have a clear definition,Energy requirements are calculated by indirect calorimetry, equations or guidelines). Comparators: Not having underfeeding Outcomes: Any assessment within the incidence and influencing factors of underfeeding (Demographic, patient-related factors, feeding method, time to initiation of enteral nutrition, prescription by physicians, interruption of enteral nutrition and drugs) Study design: Cohort studies, case-control studies, and cross-sectional studies, Journal articles published in English from from inception to November 20, 2020. Exclusion criteria Case reports Reviews,

qualitative research Studies that had not been peer-reviewed (e.g., published abstracts, dissertations, or conference proceedings) Studies that did not measure underfeeding as an outcome variable Others.

Information sources: We will search articles in four electronic databases : PubMed, Excerpta Medica data BASE (EMBASE), web of science and the Cochrane Library. All the English publication of countries or articles type. reference list of all selected articles will independently screened to identify additional studies left out in initial search.

Main outcome(s): The incidence and influencing factors of underfeeding (Demographic, patient-related factors, feeding method, time to initiation of enteral nutrition, prescription by physicians, interruption of enteral nutrition and drugs).

Quality assessment / Risk of bias analysis: We used the Newcastlee Ottawa Scale (NOS) to evaluate the quality of studies. This scale consists of three areas, selection, comparability, and outcome, and individual items are assigned a star if the risk of bias is low. Cohort and case-control studies were evaluated using the original tool, and cross-sectional studies were evaluated using the modified NOS. Quality evaluation was conducted independently by two researchers, and disagreements were discussed until consensus was achieved. Based on the number of stars in each area, the results were summarised according to the Agency for Healthcare Research and Quality standards, as good, fair, or poor quality.

Strategy of data synthesis: The search terms include ("underfeeding" OR "undernutrition" OR "practices" OR "inadequate" OR "insufficient") AND ("enteral nutrition" OR "enteral feed*" OR "Force Feed*" OR "Tube Feed*" OR "Gastric Feed*" OR "nutrition*" OR "parenteral nutrition" OR "intravenous nutrition") AND ("ICU OR "intensive care unit" OR "critic*"),(for the full search

strategy, please see Tables 1) Additional searches were carried out by hand.

Subgroup analysis: Subgroup analysis of studies on different definitions of underfeeding and different nutritional risks.

Sensibility analysis: For studies with large heterogeneity of combined results, use stata 15.0 for sensitivity analysis.

Language: English.

Country(ies) involved: China.

Keywords: underfeeding, critically ill patients, influencing factors, meta-analysis.

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