



## A SYSTEMATIC LITERATURE REVIEW ON HOSPITAL MALNUTRITION IN LATAM.

### THE PROBLEM/OPPORTUNITY

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Hospital malnutrition in Latin America is highly prevalent. Despite this prevalence, physicians' awareness of malnutrition is weak, nutritional therapy is not used routinely, and governmental policies for nutritional therapy are scarce. Based on this high prevalence and the large population, there is a huge growth potential in Latin America for clinical/parenteral nutrition.

### CLIENT'S NEEDS

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The client is currently working in a new initiative to encounter the untapped market potential for clinical/parenteral nutrition in Latin America, and publications are a critical component of the strategy to demonstrate the value for money of the 3CBs.

A systematic literature review on hospital malnutrition in LATAM should help the client:

- ✓ Raise awareness to the extent of malnutrition in LATAM and demonstrate the negative consequences of malnutrition for patient well-being and disease outcome.
- ✓ Combine “solid figures” to document the problem with clear & strong messages to take action (i.e. nutritional intervention).

### OUR APPROACH

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The systematic review was based on comprehensive and reproducible searches with clearly defined and described selections, and reporting protocols. Five databases were searched for articles published between January 1995 and September 2014: MEDLINE (via PubMed), EMBASE, the Cochrane Library, EconLit and LILACS. The Cochrane Library search included a search of the Cochrane Database of Systematic Reviews, the Database of Abstracts of Reviews of Effects (DARE), and the Cochrane Central Register of Controlled Trials (CENTRAL). Reports, theses, and pamphlets were also searched and the references of all included studies were manually reviewed to identify additional relevant studies.

The PICOS framework (Population, Intervention, Comparison, Outcomes and Setting) was used to conduct the analysis. PICOS related elements that consist of population, interventions, comparators, outcomes, setting and study design were used to generate all search algorithms used in this SLR. Search terms encompassed 3 categories: disease, geographical region, and outcomes.



Two reviewers independently screened the titles and abstracts generated from the search strategies to identify potentially relevant articles. For articles whose titles and abstracts did not provide enough information for inclusion or exclusion, the full text was analysed.

Studies that did not meet the selection criteria at this stage were excluded and the reasons for exclusion were documented. Disagreements regarding the inclusion and exclusion of studies were resolved through discussion between the two reviewers until consensus was reached. Information from accepted studies was extracted into a data extraction form.

The two reviewers also independently assessed the methodological quality of each study. Their approach focused on assessing the internal validity of the individual studies, which is defined as the extent to which study design, conduction, and reporting prevent or reduce bias in the results. The methodological quality of all studies was assessed with the checklist proposed by Z. Munn et al for observational studies reporting prevalence. This tool consists of a 10 item checklist assessing validity and quality indicators like sample adequacy, quality of reporting, appropriate description of study subjects, reliability and objectivity of measurements, proper statistical analysis, subgroups/differences identification and proper recruitment.

The quality of the included studies on the economic consequences of malnutrition was assessed using the criteria described in Molinier et al. This checklist is an adaptation of the checklist by Drummond et al and was especially developed to appraise the methodological quality of cost of illness studies based on different criteria such as definition of disease, epidemiological approach, perspective of the analysis, estimates of resource consumption, valuation of costs, discounting, sensitivity analysis and presentation of the results. The objective was not to establish a hierarchy in the criteria used by allocating them different weights, but to use these criteria to analyse the methods used.

## RESULTS

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The SLR provided the latest evidence in the field of hospital malnutrition in LATAM.

Evidence on prevalence (per country, in the ICU, in the surgical population, elderly population and per assessment tool), clinical outcomes (infections, complications and lengths of stays) and economics of hospital malnutrition were provided as basis for the manuscript which has been submitted to JPEN and is waiting for acceptance.

