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J.Nicolle Meza, Fabiola Ortiz, Eddy R. Segura, Professor



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1 **Hospital malnutrition in a low-resources country: A survey and critique of the status of the**
2 **published available literature**

3 J.Nicolle Meza¹, Fabiola Ortiz¹, Eddy R Segura²

4 ¹Nutrition and Dietetics Students, Universidad Peruana de ciencias Aplicadas Lima, Perú

5 ²Professor, School of Health Sciences, Universidad Peruana de Ciencias Aplicadas

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7 To the editor,

8 We read with great interest the paper published by Ray Sumantra et al entitled “Malnutrition in
9 healthcare institutions: A review of the prevalence of under-nutrition in hospitals and care homes
10 since 1994 in England” published recently in the journal (1). This paper presents a systematic
11 review of 16 studies about the prevalence and incidence of hospital malnutrition. Therefore, and
12 motivated by this paper, we would like to revisit and summarize the Peruvian literature on this
13 regard.

14 Hospital malnutrition, defined as the altered nutritional status, is a consequence of a deficient
15 intake while a patient is admitted in the hospital (2). This leads to a longer hospital stay, worse
16 treatment response, re-admissions and higher costs along with altered metabolic, biochemical and
17 anthropometric changes. Worldwide, the prevalence is as high as 50% according to the ELAN study
18 (2).

19 In Peru, four studies have been published between 2007 and 2013 and assessed the nutritional
20 status of adult patients in several major Public Hospitals in Lima. These available studies show an
21 overall prevalence of malnutrition in hospitals of 50% (range: 30% - 50%). This percentage is higher
22 in populations such as the elderly admitted to hospitals, between 47.8%-68.2% (2,3). A brief
23 summary of these selected studies sorted by chronological order of publication is shown in Table
24 1.

25 Most of the studies were focused on general medicine ward patients, one study focused on
26 patients undergoing gastrointestinal anastomoses and one study on Cancer patients. In most of
27 the cases the nutritional assessment was not conducted over the course of the admission so it is
28 hard to assess the actual magnitude and evolution of the nutritional impairment. This is a very
29 important methodological consideration since the actual way to assess the impact and magnitude
30 of the length of stay on the anthropometric and nutritional markers of a given patient is by means
31 of follow up. Ideally, with measurements at admission, at the moment of discharge and also in-
32 between assessments. From the reviewed Peruvian literature, only one study, to the best of our
33 knowledge, actually assess the key variables in a longitudinal fashion (3).

34 In summary, there is some Peruvian literature about this topic, mostly focused in Lima, the capital
35 city. A comprehensive study is needed to assess the nutritional and anthropometrical status and
36 relevant biochemical markers at both the moment of admission and over the course of the
37 hospital stay. Even more, to spread the scope of such ideal type of studies to other settings in Peru
38 and to a broader type of patients specially those at high risk of malnutrition given their underlying

39 disease (cancer, kidney and liver diseases, inherent metabolic disorders, etc). Studies on this

Number of reference	Year and type of publication	Study design	Results
4	2007 Article	Prospective, descriptive	On admission, 47, 8% have malnutrition. During hospitalization, between 6% and 9% of subjects developed malnutrition according to weight and arm circumference criteria.
5	2012. Thesis	Descriptive, cross-sectional	Prevalence of malnutrition on colon and rectum cancer patients were more than 50% (47% risk of Malnutrition or moderate malnutrition and 14% of severe malnutrition)
3	2012 Article	Prospective, longitudinal	The prevalence of malnutrition in surgical patients is high. Malnourished patients show a higher incidence of complications and prolonged hospital stay.
2	2013 Article	Analytical cross-sectional	Prevalence of malnutrition was 46.9% and caloric and protein malnutrition were 21, 3% y 37, 5% in subjects already admitted to General Medicine and General Surgery Wards.

40 regard should be warranted in the Peruvian scenario.

41 **Table 1: Studies related to malnutrition in Peruvians Hospitals**

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