



## ABSTRACT

**Background** Children admitted to the hospital are at risk to develop malnutrition due to decreased of food intake, hypermetabolism, malabsorbtion and loss of nutrients. In-hospital malnutrition is associated with increased risk of adverse clinical events, prolonged hospital stay and health cost. However, little is known about predictors that are related to in-hospital malnutrition in children

**Objective** We aim to evaluate of food intake, initial nutritional status, fever, diarrhea, malignancy, multiple diagnosis and severity of disease as predictors in-hospital malnutrition in children.

**Methods** We conducted a prospective study on 1 month-18 year old children hospitalized at Sardjito Hospital Yogyakarta between September-October 2012. The subjects were collected using consecutive sampling methods. This study recruited 224 subjects. There were 20 subjects that were not analyzed due to incomplete data. Weight and height were measured as part of routine admission procedure. Weight was measured daily in the same condition until discharge. In-hospital malnutrition was defined as a weight loss of  $\geq 2\%$  (lenght of stay  $\leq 7$  days), 5% (lenght of stay 8-30 days) or 10% (lenght of stay  $>30$  days). Food intake, nutritional status, fever, diarrhea, malignancy, multiple diagnosis and severity of disease were assessed within 48 hours.

**Result** The proportion of in-hospital malnutrition in children was 27%. In the multivariate statistical analysis, the only significant predictor of in-hospital malnutrition was the severity of disease (RR=2,56; CI=1,22-5,38).

**Conclusion** The severity of disease is a predictor of in-hospital malnutrition in children.

**Keyword:** In-hospital malnutrition, children, severity of disease



## INTISARI

**Latar belakang:** Perawatan anak di rumah sakit berisiko terhadap kejadian malnutrisi rumah sakit akibat dari penurunan asupan makan, hipermetabolisme, malabsorpsi dan kehilangan nutrisi. Malnutrisi rumah sakit berdampak pada peningkatan kejadian komplikasi penyakit, lama perawatan dan biaya pelayanan. Sekalipun demikian masih sedikit penelitian yang membahas tentang faktor prediktor malnutrisi rumah sakit pada anak.

**Tujuan:** Mengevaluasi asupan makan, status nutrisi awal, demam, diare, keganasan, diagnosis multipel dan derajat penyakit sebagai faktor prediktor malnutrisi rumah sakit pada anak.

**Metode:** Kami melakukan penelitian prospektif pada pasien anak yang dirawat di RSUP Dr Sardjito usia 1 bulan sampai 18 tahun pada bulan September sampai dengan Oktober 2012. Subyek diambil secara konsekutif. Subyek penelitian sebanyak 224, terdapat 20 subyek penelitian yang tidak dianalisis dalam penelitian ini karena ketidaklengkapan data. Berat badan diukur setiap hari pada kondisi yang sama sampai dengan pasien dipulangkan. Malnutrisi rumah sakit didefinisikan sebagai penurunan berat badan  $\geq 2\%$  (perawatan  $\leq 7$  hari), 5% (perawatan 8 sampai 30 hari) atau 10% (perawatan  $\geq 30$  hari). Asupan makan, status nutrisi, demam, diare, keganasan, diagnosis multipel dan derajat penyakit dinilai dalam 48 jam pertama perawatan.

**Hasil:** Proporsi malnutrisi rumah sakit pada anak sebesar 27%. Analisis multivariat menunjukkan bahwa derajat penyakit adalah faktor prediktor malnutrisi rumah sakit pada anak (RR=2,56; CI=1,22-5,38).

**Simpulan:** Derajat penyakit adalah faktor prediktor malnutrisi rumah sakit pada anak.

**Kata kunci:** malnutrisi rumah sakit, anak, derajat penyakit