**Service Priorities and Programmes**

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# Early risk detection by malnutrition screening tool: Improved patient-reported outcomes on malnourished individual

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## Introduction

Malnutrition is associated with negative outcomes for patients, including higher infection and complication rates, increased muscle loss, impaired wound healing, longer length of hospital stay and increased morbidity and mortality. North District Hospital introduced the Malnutrition Screening Tool since 2012. An effective malnutrition screening tool carried out by a multidisciplinary team is promising for early detection of the malnourished patients for proper nutrition intervention.

## Objectives

This review investigates how conducting malnutrition risk screening upon admission can improve patient-reported outcomes in undernutrition individuals often measured by energy and protein intake.

## Methodology

Sixty patients screened with a high risk of malnutrition upon admitting to NDH during Nov 2015 to Nov 2016 were selected for energy and protein consumption analysis. Nurses were responsible for screening for and report patients at risk of malnutrition during admission and encouraged and monitored oral intake during the hospital stay. Dietitian was responsible for providing nutrition assessment and intervention for the malnourished patients. We used 25-35kcal/kg/body weight and 1.2g protein/kg/body weight for energy and protein requirements estimation. There were 36 male and 24 female patients, and the mean age was 73±13.8 year-old and means weight was 49.1±10.3kg. Actual energy and protein consumption were collected during at the first dietitian consultation and the follow-up visit for comparison. Patients with renal disease were excluded in this review.

## Result

The energy and protein consumptions increased significantly from 53% to 83% and 50% to 85% respectively after the intervention. The baseline daily energy intake was 730±265kcal and increased significantly to 1131±311kcal with a p-value <0.01 (95% CI -506.0 to -296.9) after the intervention. The baseline daily protein intake was 31±10.7g and increased significantly to 49±13.9g after intervention with a p-value <0.01 (95% CI -22.1 to -13.1). Upon admission, only 10% of the patients had received adequate energy and protein intake (adequate intake implies oral intake is >75% of the estimated nutritional requirement), the percentage of patient receiving adequate energy and protein intake increased significantly to 67% and 70% respectively after the malnutrition risk screening and the nutrition intervention with a p-value <0.01. Further qualitative studies on the causes of inadequate oral intake in malnourished patients are recommended for future service enhancement purpose.