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## A pilot study to evaluate the prevalence of malnutrition in patients with *Clostridium difficile* (*C. diff*) infection

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Malnutrition is frequently reported in hospitalised adults and it is associated with significant adverse consequences in relation to health outcomes and healthcare expenditures. In 2006 the Healthcare Commission reported on *C. diff* outbreaks at Stoke Mandeville Hospital<sup>(1)</sup>, increasing the awareness of *C. diff*-associated complications amongst UK hospitals. However, there is presently no data relating to the prevalence of malnutrition in patients with *C. diff* infection. The aims of the present study were: to establish the prevalence of malnutrition by Malnutrition Universal Screening Tool (MUST) screening<sup>(2,3)</sup> in adults with *C. diff* infection; to carry out anthropometric measurement of BMI and albumin levels; functional assessment of handgrip (HG) strength<sup>(4)</sup>; nutrient intake using food record chart. During 2007–8 seventy-six patients aged between 18 and 103 years admitted to a district general hospital with hospital-acquired *C. diff* infection were assessed after having obtained local ethics approval. The present study found that the prevalence of undernutrition was 57% (MUST 2) at the time of *C. diff* diagnosis. In total 26% of patients had a BMI <20 kg/m<sup>2</sup>, 87% of patients were found to have a hypoalbuminaemia (albumin <30 g/l) and 73% of patients were found to have eaten less than half their meal at the time of diagnosis. Malnourished patients (MUST 2) were found to have a significantly lower HG strength (MUST 2, 45.5% reference value v. MUST 0, 98.5% reference value; *P*=0.0015). No difference was found in relation to albumin levels (MUST 2, 22 g/l v. MUST 0, 22.5 g/l; *P*=0.34) when compared with well-nourished patients (MUST 0). The prevalence of malnutrition in patients with *C. diff* infection appears to be common in hospital and may be a risk factor for infection. Special attention should be given to vulnerable patients in hospital. A follow-up study with a larger sample size is underway to assess whether or not nutritional support improves patient clinical outcomes.

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3. National Institute for Health and Clinical Excellence (2006) *Nutrition Support in Adults: Oral Nutrition Support, Enteral Tube Feeding and Parenteral Nutrition*. London: NICE.
4. Klidjian AM, Forster KJ, Kammerling RM *et al.* (1980) *Br Med J* **281**, 889–901.