Implementing muscle mass assessment into routine clinical dietitian care

Initiative Type

Service Improvement

Status

Deliver

Added

28 November 2019

Last updated

12 February 2024

URL

https://test.clinicalexcellence.qld.gov.au/improvement-exchange/implementing-muscle-mass-assessment-routine-clinical-dietitian-care

Summary

Malnutrition in hospitals is common and usually identified by weight loss. However, weight loss does not give information about body composition - the amount of fat and muscle in the body. Malnutrition

often causes muscle loss and this is associated with poor outcomes. Dietitians aim to improve or stabilise muscle mass and as such, assessing muscle mass of their patients, it is expected that this would improve outcomes. There are many barriers and enablers to perform muscle mass as part of dietitian care in hospitals. At Mater Hospital Dietetics and Food Services, dietitians identified these barriers and enablers and set up a project to develop a strategy that will enable the implementation of muscle mass assessment into routine care.

Key dates

Mar 2017

Mar 2020

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Aim

The aim of this project was to access the knowledge, beliefs, barriers and enablers of dietitians to implement muscle mass assessment as part of Body Composition Assessments (BCA) in routine clinical care.

Benefits

Barriers and enablers to BCA were identified in the Theoretical Domains Framework (TDF). Through the behaviour change wheel (BCW), strategies were identified to overcome these barriers, and operationalised as: • Barriers to BCA were identified in all TDFs: Knowledge; Skills; Social/ professional role and identity; Beliefs about capabilities; Beliefs about consequences; Goals; Memory, Attention and decision processes; Environmental context and resources; Social influences; Intentions; Emotion; Optimism; Reinforcement and Behavioural regulation. • Enablers to BCA included: Skills; Beliefs about consequences; Goals; Environmental context and resources; Social influences; Intentions; Optimism; and Reinforcement. • The interventions were operationalised as: 1. a professional development strategy 2. a BCA clinical champion project 3. a departmental integration process Each was underpinned by specific behaviour change strategies to target barriers and elicit practice change.

Background

Malnutrition occurs in 12-53% of patients admitted to Australian hospitals. In addition to involuntary body weight loss, which is relatively easy to identify, malnutrition leads to muscle loss. Muscle loss and a low muscle status (‘sarcopenia’) are associated with poor clinical outcomes. Whilst parameters of the Subjective Global Assessment (SGA) and Patient-Generated (PG) SGA assessment tools are easy to gather and rate highly regarding sensitivity, specificity and inter-rater reliability, they do not provide objective data on muscle mass, and fail to recognise that patients with any Body Mass Index (MBI) can have a low muscle status. With higher rates of obesity and increased recognition of age-related sarcopenia, additional objective measures to diagnose malnutrition and sarcopenia in hospital patients and to monitor treatment effectiveness are required and recommended by the international clinical nutrition community.

Solutions Implemented

The implementation process involved: • Surveying Mater Health dietitians on knowledge, beliefs and practices around BCA, informed by theoretical domains framework (TDF) domains and literature evidence • defining and categorising identified barriers and enablers surrounding BCA using the TDF • identifying appropriate interventions to overcome barriers to facilitate integration of BCA by using the BCW • integrating the interventions into a department-wide strategy with 3 main evidence-informed interventions.

Lessons Learnt

Do not only develop solutions to a problem, but explore and utilise barriers to change and find appropriate solutions targeted at these barriers. Novel and unexpected interventions emerged which reassured the team the correct methodology was followed.

References

All key opinion papers and clinical studies from PubMed (using appropriate search terms on BCA) were included, regardless of scientific quality, as this is an upcoming area. An implementation scientist, senior research dietitian and two clinical HP3 dietitians collaborated to use the literature to set priorities, survey questions and procedures on applying BCA in a clinical setting.

PDF saved 03/02/2025