Background

Malnutrition is prevalent in patients with head and neck cancer (HNC) impacting on clinical, cost and patient-centred outcomes. Consequently, nutrition intervention plays a crucial role in the provision of best-practice care across the Nutrition Care Framework14 continuum of care (Figure 1). Despite publication of internationally endorsed evidence-based guidelines (EBGs)1, evidence-practice gaps remain. Reasons include insufficient dietetic resources, lack of familiarity with best-practice recommendations amongst the multidisciplinary team (MDT), infrastructure limitations and lack of awareness by patients and caregivers regarding the intensiveness of nutrition care required. This project aimed to implement and evaluate an innovative, best-practice dietetic model of care (MOC) based on the published EBGs for nutritional management of adult patients with HNC. Through integration with the MDT and engagement with adult local leaders, the MOC took a patient-centred approach to delivery of nutritional care to minimise the detrimental sequence of malnutrition and improve patient outcomes.

An implementation science approach was employed, utilising a mixed methods, pre-post study design (Figure 2). Qualitative interviews identified barriers and facilitators to change at individual, team and system levels. Clinical audit established baseline adherence to the EBGs and clinical parameters prior to implementation in a prospective cohort. The new MOC comprised two key interventions: a Supportive Care-Led Pre-Treatment Clinic and a Nutrition Care Dashboard integrated within weekly MDT discussions. Key implementation strategies are highlighted in Figure 3. Focus groups provided feedback on the new MOC while economic analysis determined system-level impact.

Baseline audit (n=98) and qualitative analysis (n=30) revealed reactive nutrition care with lack of awareness of EBGs and intensive nutrition care, and dietetic resource and infrastructure limitations. Post-implementation data (n=34) demonstrated improved process, clinical and economic outcomes (Figure 4): pre-treatment dietitian assessment (20% to 97%, p<0.001); use of validated nutrition assessment tool before (85% to 100%, p=0.018), during (3% to 79%, p<0.001) and after treatment (3% to 73%, p<0.001). Patients receiving the new MOC were more likely to complete prescribed radiotherapy (p=0.041) and systemic therapy (p=0.005). Percentage weight loss was maintained below the poor prognostic threshold of >5% for all time points. At a system-level, the new MOC avoided 3.92 unplanned admissions and related costs of $AUD121k/annum. Focus groups with clinicians (n=13) confirmed clear support for continuing the new MOC (Figure 5).

The new evidence-based MOC proved to be a feasible translation of research into practice which demonstrated improved outcomes (Figure 6). The broader implementation of gold standard oncology nutrition care is highly desirable and the nutrition care framework may be transferrable to other patient groups, particularly those at high nutritional risk. New knowledge translation and implementation skills acquired in this project can be readily transferred to various care settings in alignment with best practice nutrition care guidelines.

References