

Effectiveness of a nutrition assistant role in a multidisciplinary head and neck cancer clinic

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Background

- Treatment for head and neck (H&N) cancer
 - Surgery
 - Chemotherapy (CTx)
 - Radiotherapy (RT)
 - Combination
- RT or chemoRT delivered over a period of 5–7 weeks
- Associated with significant acute toxicities
 - Mucositis, odynophagia, dysphagia, xerostomia and anorexia
 - Substantial impact on nutritional status and swallowing function

Background

- Malnutrition prevalence in H&N cancer is as high as 50% prior to treatment
- Rates of dysphagia prior to treatment is 59%
- Further exacerbation of malnutrition 2° acute and late Tx toxicities
- EBG recommend:
 - Weekly dietetic contact improves outcomes in patients receiving RT
(*NHMRC Grade A*)
<https://www.cosa.org.au/publications/guidelines.aspx>
- Substantial requirement for dietetic services

Baseline model of care

- At Peter Mac, pts with H&N cancer receiving curative RT or chemoRT are managed in a twice weekly MD clinic
 - Radiation Oncologists, Dietitians, Speech Pathologist, Nurses, Pharmacist
- 40 – 50 pts on treatment at any one time
- 20 – 30 pts attend each MD clinic
- Pts are seen by the dietitian
 - Weekly during radiation
 - Fortnightly up to 6 weeks post radiation
- Limited time to spend with patients with complex nutritional needs

Nutrition assistant (NA) workforce

- NAs are AHAs specialising in nutrition
- Comprehensive 8 week orientation training program
- Usual roles:
 - Malnutrition screening
 - Basic nutrition intervention
 - Inpt and ambulatory setting
- Identified scope to implement this role in the MD H&N clinic to perform screening and basic intervention to release dietitian time

Aims

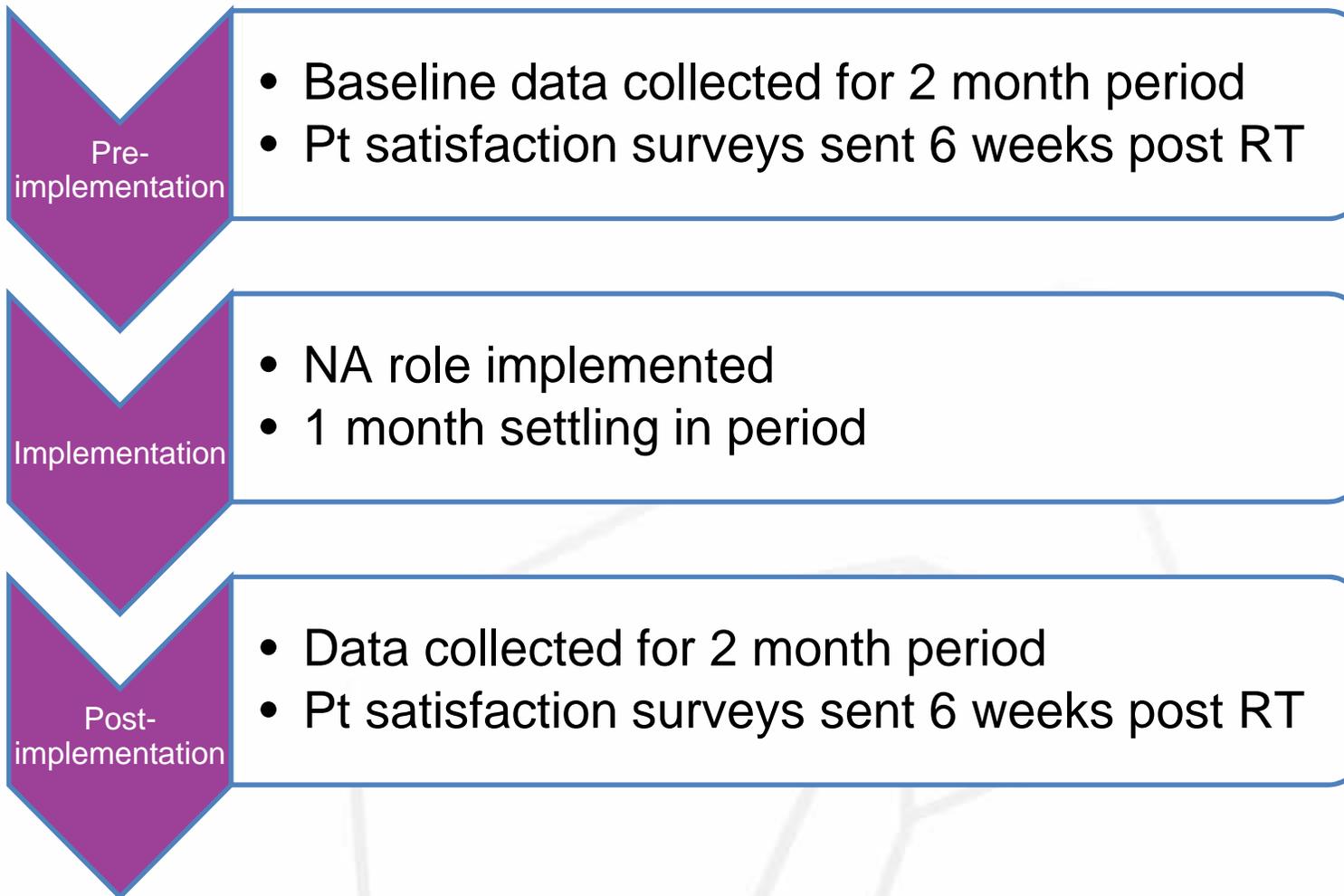
- To evaluate the effectiveness of the NA role in the MD H&N clinic
 - Proportion of dietitian time spent with higher risk patients
 - Impact on clinical outcomes
 - Patient satisfaction (validated patient satisfaction with nutrition services questionnaire)



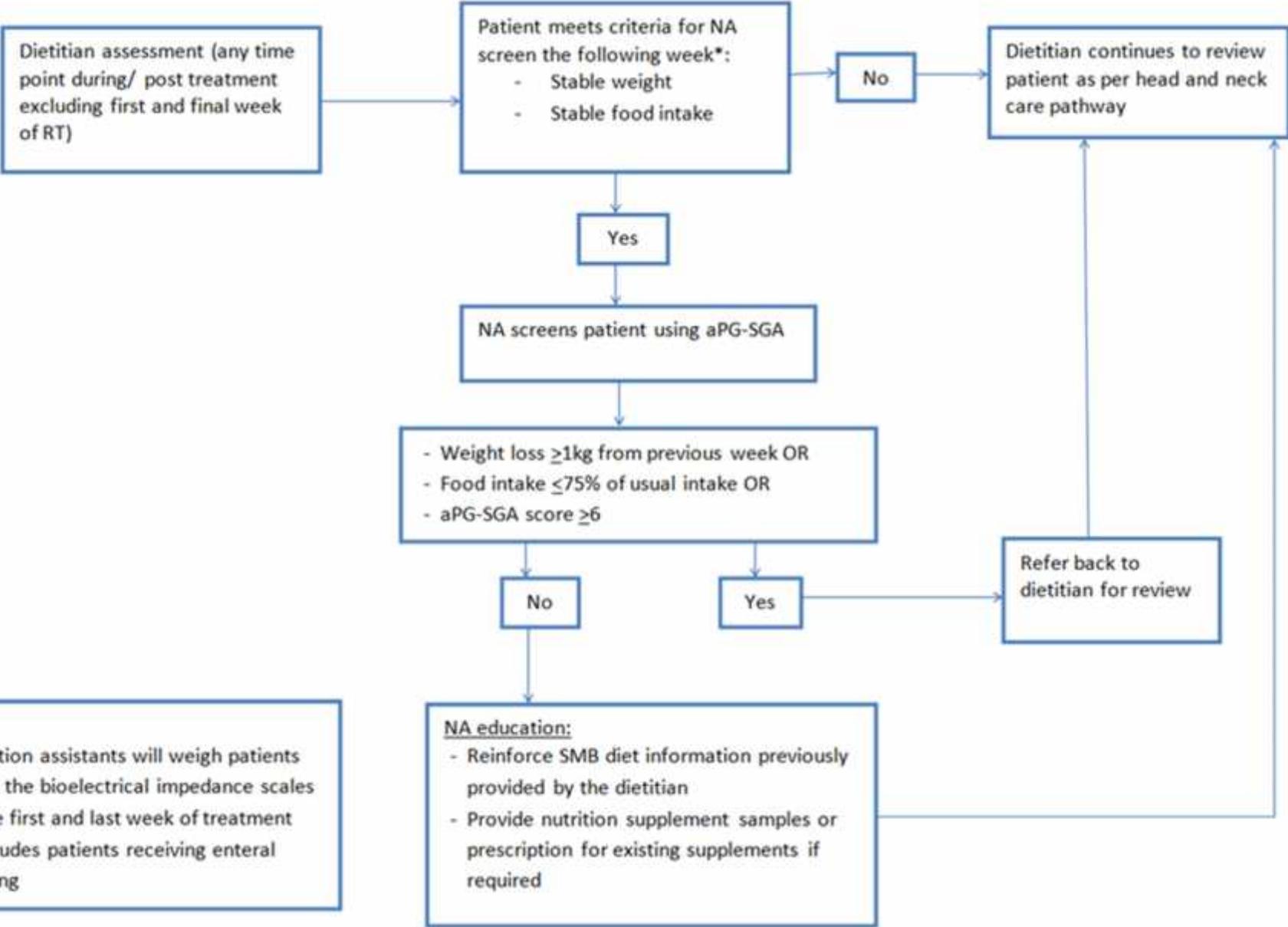
Nutrition risk criteria

- High risk:
 - T3-T4 &/or N2-N3 oropharynx, larynx, hypopharynx, nasopharynx
 - T3-T4 &/or N2-N3 oral cavity
 - Adjuvant chemoRT
 - Mild to severe malnutrition in the presence of dysphagia.
- Intermediate risk:
 - Adjuvant chemoRT for non-oral cancer sites
 - Adjuvant RT for oral cancer sites
 - In-field boost
 - Definitive RT alone +/- cetuximab
- Low risk:
 - Adjuvant RT non oral cancer sites (parotid, paranasal sinuses)
 - Mild malnutrition in the absence of dysphagia
 - Well-nourished

Methods



New model of care



Nutrition assistant training

- New training module:
 - Observation in the clinic
 - Nutrition care pathways
 - Use of the PG-SGA short form
 - Malnutrition in Cancer eLearning program - H&N cases
 - Familiarity with referral triggers back to the dietitian
 - Use of BIA scales



Patient characteristics

Characteristic	Pre-implementation group (n=43)	Post-implementation group (n=48)
Age (years), median (IQR)	62 (56 – 70)	63 (55 - 74)
Gender, n (%)		
Male	33 (76.7%)	38 (79.2%)
Female	10 (23.3%)	10 (20.8%)
Tumour type		
Oral cavity	12 (27.9%)	10 (20.8%)
Oropharynx	19 (44.2%)	28 (58.3%)
Nasopharynx	4 (9.3%)	1 (2.1%)
Hypopharynx	0 (0%)	3 (6.3%)
Larynx	7 (16.3%)	3 (6.3%)
Paranasal sinuses	1 (2.3%)	1 (2.1%)
Salivary	0 (0%)	2 (4.2%)
Disease stage, n (%)		
I	6 (14.0%)	1 (2.1%)
II	0 (0%)	2 (4.2%)
III	10 (23.3%)	12 (25.0%)
IVa	27 (62.8%)	30 (62.5%)
IVb	0 (0%)	3 (6.3%)
Concurrent chemotherapy, n (%)	25 (58.1%)	31 (64.6%)
Weight (kg), median (IQR)	76.2 (61.8 – 93.7)	73.7 (62.8 – 85.4)
BMI ^b (kg/m ²), median (IQR)	25.1 (21.8 – 30.3)	25.7 (22.3 – 28.6)

21 (44%) patients identified for NA screen/ intervention

Outcomes - clinical

- Mean weight change similar
 - During RT (-5.6% vs **-4.7%**, $p= 0.2$)
 - Up to 4/52 post RT(-6.6% vs -6.5%, $p= 0.9$)
- Clinically important \downarrow in pts receiving NGT feeding (42% vs 29%). Mean time to NGT feeding unchanged.
- NA role utilised in all risk categories. Minimal low risk numbers (n=1 and n=2).
- Low proportion of same day referrals back to DT
- No change in direction of DT time - focus on high risk patients (88% vs. 86%)

Outcomes – patient satisfaction

- Clinically and statistically significant improvement in:
 - Overall patient satisfaction (4.0 ± 1.1 vs 4.6 ± 0.61 , $p=.03$)
 - Patient perceived benefit (3.8 ± 0.69 vs 4.4 ± 0.62 , $p<.01$)
 - Dietitian interpersonal skills (3.91 ± 1.1 vs 4.6 ± 0.55 , $p=.02$)
- Attributed to:
 - Patients receiving most appropriate care at the appropriate time
 - NA intervention patients had to meet strict criteria (stable weight and food intake) → shorter intervention likely preferable in these circumstances to full DT review

Outcomes – financial

- Robust economic evaluation not completed
- Model of care suggests a cost benefit related to difference in labour costs



Conclusion

- Nutrition assistants are an effective workforce in a MD H&N cancer clinic
- They support release of dietitian time across all H&N risk categories
- Demonstrated clinical outcomes are maintained and an increase in patient satisfaction
- Currently evaluating the effectiveness of the role in supporting the speech pathologists in the clinic

QUESTIONS?

Malnutrition
in Cancer
eLearning



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<https://education.eviq.org.au/courses/malnutrition-in-cancer>