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| Cancer malnutrition: feeding everyone from hospital to home  Final project report |
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Department of Health

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| Cancer malnutrition: feeding everyone from hospital to home  Final project report |
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# Authorship

*Cancer malnutrition: feeding everyone from hospital to home* is an initiative of the Victorian Government. It forms part of the Malnutrition in Victorian Cancer Services program. The Nutrition Department at Peter MacCallum Cancer Centre (Peter Mac) was commissioned to provide statewide leadership and project management.

This report was written by Ms Jane Stewart from the Peter Mac Nutrition Department, with support from Jenelle Loeliger, the project team and project steering committee.

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## Project team

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# Executive summary

Malnutrition remains a prevalent issue for cancer patients across the continuum of care and commonly leads to poor clinical outcomes [1]. Data from a 2016 cancer malnutrition point prevalence study indicates that 23 per cent of patients attending Victorian cancer services are malnourished [2]. Malnutrition is associated with reduced treatment tolerance, increased morbidity and mortality, and higher healthcare costs [3-6]. Appropriate nutrition care can improve the clinical outcomes of patients with cancer and their healthcare experience [5, 6].

In the general patient population studies have found that malnutrition is under-detected and under-treated in the primary care setting [7]. In Australia, the prevalence of malnutrition in the community is estimated at 1–8 per cent, with those being ‘at risk’ of malnutrition ranging from 15 to 40 per cent [8-12]. The cost of managing malnourished patients in the community is more than twice that of managing well-nourished patients due to increased use of healthcare resources. Malnourished patients require more frequent drug prescriptions, laboratory tests, diagnostic procedures, general practitioner (GP) visits and hospital admissions [7].

To successfully and effectively address malnutrition, a statewide approach beyond hospitals is required. This project seeks to address cancer malnutrition in a statewide platform that more broadly supports multidisciplinary nutrition care spanning acute, primary care and community settings, focusing on clinical governance processes and education for clinicians working with people with cancer.

## Objectives

1. Form a partnership between acute, primary care and community health sectors to:
   * + 1. ascertain current knowledge, nutrition practice and nutrition governance in the primary care and community sectors regarding cancer malnutrition
       2. understand education needs regarding cancer malnutrition and identify existing/new resources that may be beneficial in the primary care and community settings
2. Modify and target existing cancer malnutrition resources developed by the Malnutrition in Victorian Cancer Services (MVCS) program for the primary care and community sectors and promote them to clinicians working with oncology patients
3. Promote the value of statewide cancer malnutrition and nutrition care indicators to be mandatory and/or included within an appropriate quality framework for health services, primary care and community settings

## Strategies

* Key stakeholders within the primary care and community sector were engaged to form a statewide partnership in relation to cancer malnutrition.
* A literature review was completed on: malnutrition screening; management of malnutrition in primary care and community settings; and the transition of nutrition care from acute to community sectors.
* A questionnaire was distributed to Victorian dietitians working in acute cancer services, community rehabilitation, community health services and private practice.
* A questionnaire was distributed to Victorian GPs and general practice nurses (GPNs).
* A plan was prepared to modify existing MVCS resources (and to develop new resources) to meet the needs of clinicians working with cancer patients in the primary care and community sectors.
* An implementation plan was developed to assist in promoting the MVCS resources to clinicians working in primary and community care.
* A review of grey and published literature was conducted to identify Australian and international quality frameworks, nutrition care standards and nutrition performance indicators.
* Key stakeholders were identified and engaged with to promote the value of mandatory statewide nutrition care standards or performance measures to be included within relevant quality frameworks.

## Key learnings

### Management of cancer malnutrition in primary care and community settings

* One hundred and fifty-two dietitians, 22 GPs and 10 GPNs completed the questionnaires.
* GPs and GPNs have limited knowledge of cancer malnutrition, and the majority (91 per cent) would like additional support, education or resources on cancer malnutrition.
* Eighty-eight per cent of GPs and GPNs believe they should have primary responsibility for screening patients for malnutrition, and almost all (94 per cent) would see benefit in having access to a validated malnutrition screening tool to assist in the assessment of a patient’s nutrition risk.
* Nutrition risk screening is routinely completed on initial presentation in less than half (43 per cent) of services in the community sector. When nutrition risk screening is completed, the Malnutrition Screening Tool (MST) is the screening tool predominantly used.
* Seventy-eight per cent of GPs and GPNs and 63 per cent of dietitians working in primary care or community settings believe there are patients with cancer malnutrition going unrecognised in their service.
* Despite there being a range of cancer malnutrition education resources specifically for dietitians, these resources are poorly accessed by dietitians working in primary care and community settings, with a quarter of dietitians surveyed not aware of those currently available. The majority (75 per cent) of respondents reported they would like additional support or resources on cancer malnutrition.
* Only a small number (9 per cent) of dietitians working in the primary care and community sectors reported using the *Malnutrition governance toolkit*. This is not surprising because the tool was developed for health service clinicians and has an acute health service focus.
* Nutrition governance in the primary care and community sectors is complicated. There are a number of quality frameworks for this sector; however, only those community health centres and community rehabilitation services integrated with a health service are required to meet nutrition care standards.

### Transition of care post treatment

* Thirty per cent of acute oncology dietitians rarely or never refer their patients to dietitians in the primary care or community sector. Approximately half of respondents reported providing follow-up care in outpatient clinics or over the phone. Reasons for not referring patients to dietitians in the primary care and community sectors include the complex care needs of patients, the time/resources required to make the referral, long wait lists and not knowing where to refer.
* Only 54 per cent of acute oncology dietitians were aware of cancer rehabilitation programs running in Victoria, and only 20 per cent of dietitians who were aware of these programs have made a referral.
* GPs are unlikely to receive nutrition information for malnourished cancer patients at the completion of treatment, with two-thirds of acute oncology dietitians reporting they never or rarely provide a discharge summary to GPs.

### Cancer malnutrition education resources for the primary care and community sector

* Existing MVCS education resources require modification and targeting for the primary care and community sectors.

### Transform cancer malnutrition

* The nutrition information captured by the Victorian Admitted Episode Dataset (VAED) is the only centralised statewide data source that can be used to develop statewide nutrition performance indicators.
* A malnutrition performance indicator has been included within the *Victorian cancer plan monitoring and evaluation framework*.
* Ongoing work is required to promote the value of statewide malnutrition performance indicators and the development of a nutrition care policy for Victoria.

## Recommendations

1. Efforts should be made to improve the identification of nutrition risk and management of malnutrition in general practice. This should include improving access to a validated malnutrition screening tool and implementing appropriate malnutrition risk screening at first presentation to general practice and on transition back into primary care after treatment. Malnutrition management could be improved by promoting the use of chronic disease management plans and incorporating team care arrangements with dietitians to better support the nutritional management of malnourished patients in primary care.
2. Improvements must be made to improve the transition of nutrition care for patients with cancer malnutrition between sectors. Acute oncology dietitians should be encouraged to provide GPs with nutrition information on discharge and supported to refer appropriate patients into the primary care and community sectors upon completion of treatment. It is important to capture the voice of patients with cancer malnutrition and their carers to better define what consumers want regarding their nutrition care. The co-design of a cancer nutrition care pathway within the next MVCS project will help achieve this and should assist in giving clinicians the knowledge and confidence to know how (and in which setting) patients with cancer malnutrition should be managed.
3. There is a need for targeted cancer malnutrition education resources for health professionals working in the primary care and community sector. This includes specific general practice and community modules within the Malnutrition in Cancer eLearning Program, and development of an *Understanding malnutrition and cancer for health professionals* fact sheet (incorporating a malnutrition screening tool) that can be used for any clinician working with cancer patients but will specifically fill a need for health professionals working in primary care.
4. Further work should be undertaken to better understand the data gaps between the percentage of patients coded for malnutrition in the VAED and the actual prevalence of malnutrition. This could be investigated alongside the 2018 cancer malnutrition point prevalence study.
5. Continue to explore possibilities for a statewide malnutrition clinical indicator and the development of a nutrition care policy for Victoria; and work with relevant bodies to ensure that nutrition care standards are included within quality frameworks relevant to the primary care and community sectors.
6. Leverage what we now know and have learnt regarding cancer malnutrition to other high-risk groups and/or the general population.

# Project title

# Section 1: Background

## 1.1 Background

Malnutrition remains a prevalent issue for patients with cancer and commonly leads to poor clinical outcomes [1]. Data from a 2016 cancer malnutrition point prevalence study indicates that 23 per cent of patients attending Victorian cancer servicers are malnourished [2]. Malnutrition is associated with reduced treatment tolerance, increased morbidity and mortality, and higher healthcare costs [3-6]. Appropriate nutrition care can improve the clinical outcomes of patients with cancer and enhance patient experience [5, 6].

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| **Disease-related malnutrition** has been defined as a condition that results from the activation of systemic inflammation by the underlying disease. The inflammatory response causes anorexia and tissue breakdown that can, in turn, result in significant loss of body weight, loss of skeletal muscle mass and declining physical function [13]. Patients may suffer from malnutrition irrespective of initial body weight.  **Malnutrition has been classified as** [14]:  Body mass index < 18.5kg/m2 or unintentional loss of weight ≥ 5 per cent *with* evidence of suboptimal intake resulting in subcutaneous fat *and/or* muscle wasting. |

The Malnutrition in Victorian Cancer Services (MVCS) program convened in 2011 and has undertaken a number of initiatives to address cancer malnutrition in the acute health sector. To date, the MVCS program of work has:

* identified the extent of cancer malnutrition in Victorian hospitals with a biennial cancer malnutrition point prevalence study since 2012
* supported initiatives targeting malnutrition within hospitals
* created a range of evidence-based resources to support nutrition care, clinical governance and education in the acute health sector.

However, practices relating to the management of cancer malnutrition in the primary care and community sector remain less understood.

When considering the general population, evidence from the UK suggests that the majority (93 per cent) of patients who are at risk of malnutrition live in the community [15]. In Australia the prevalence of malnutrition in the community has been shown to be 1–8 per cent, with those being ‘at risk’ of malnutrition ranging from 15 to 40 per cent (with greater risk in those receiving domiciliary care services) [8-12].

The cost of managing malnourished patients in the community is more than twice that of managing well-nourished patients due to an increased use of healthcare resources. Malnourished patients require more frequent drug prescriptions, laboratory tests, diagnostic procedures, general practitioner (GP) visits and hospital admissions [7].

## 1.2 Service gaps

In the general patient population, studies have found that malnutrition is under-detected and under-treated in the primary care setting. Completion rates for malnutrition screening are poor and patients identified as ‘at risk’ of malnutrition often do not receive dietetic input or oral nutrition support [16].

To effectively reduce the burden of malnutrition on our community, a statewide approach beyond hospitals (the focus of the MVCS program to date) is required. This project seeks to address malnutrition in a statewide platform that more broadly supports multidisciplinary nutrition care spanning acute, primary care and community settings, focusing on clinical governance processes (inclusion of malnutrition care indicators within quality frameworks) and education for clinicians working with people with cancer. This includes investigating education needs, sharing resources, advocacy and scoping how we can improve connections and partnerships between acute and community settings in an effort to reduce the cancer malnutrition burden.

# Section 2: Project model of care

## 2.1 Objectives

1. Form a partnership between acute, primary care and community health sectors to:
   * + 1. ascertain current knowledge, nutrition practice and nutrition governance in the primary and community care sectors regarding cancer malnutrition
       2. understand education needs regarding cancer malnutrition and identify existing/new resources that may be beneficial in the primary care and community settings
2. Modify and target existing cancer malnutrition resources developed by the MVCS program for the primary care and community sector and promote them to clinicians working with oncology patients
3. Promote the value of statewide cancer malnutrition and nutrition care indicators to be mandatory and/or included within an appropriate quality framework for health services, primary care and community settings

## 2.2 Expected outcomes

1. Formation of a statewide partnership spanning the acute, primary care and community health sectors in relation to cancer malnutrition
2. Comprehensive understanding of knowledge, resources and practices associated with cancer malnutrition within the primary care and community sectors
3. Confirmation of overall needs associated with cancer malnutrition and identification of existing education/practice resources from the MVCS program that will be beneficial to share within the primary care and community sectors
4. Consolidation of resources, increased reach and uptake of cancer malnutrition education/resource packages across all health services, primary care and community settings
5. Progress in statewide reporting of cancer malnutrition and nutrition care indicators and/or appropriate identification and/or inclusion within a quality framework for health services, primary care and community settings
6. Final report including key deliverables, recommendations and a sustainability plan

# Section 3: Project implementation

## 3.1 Project framework

Stage 1: Cancer malnutrition beyond hospitals

| Objective | Strategies |
| --- | --- |
| 1. Form a partnership between acute and primary/community care sectors to:   (a) ascertain current knowledge, nutrition practice and nutrition governance in the primary and community care sectors regarding cancer malnutrition  (b) understand education needs regarding cancer malnutrition and identify existing resources that may be beneficial in the primary care and community settings | * 1. **Environmental scan**   Engage with key stakeholders within the primary care/community sector (Australian Cancer Survivorship Centre, Cancer Council Victoria (CCV), Victorian Comprehensive Cancer Centre, Primary Health Networks (PHN), Victorian PHN Alliance and Integrated Cancer Services) to form a statewide partnership in relation to cancer malnutrition   * 1. **Conduct literature review**   Malnutrition screening / management of malnutrition in primary and community care  Nutrition models of shared care   * 1. **Survey of GPs and general practice nurses (GPNs)**   Develop a short questionnaire to ascertain current knowledge, nutrition practice, nutrition governance and education needs of GPs and GPNs  Distribute the questionnaire to Victorian GPs and GPNs using one or more of the following mechanisms: at GP/GPN forums, online or via e-newsletters   * 1. **Survey of dietitians**   Develop an online questionnaire to ascertain clinical governance practices, referral practices and benefits/barriers to shared care nutrition models  Distribute the online questionnaire to: private practice dietitians in Victoria; dietitians at Victorian community health/rehabilitation centres; and acute oncology dietitians working in Victorian cancer services |

Stage 2: Package and translate cancer malnutrition

| Objective | Strategies |
| --- | --- |
| 1. Modify existing cancer malnutrition resources developed by the MVCS program for the primary care and community sectors and promote them to clinicians working with oncology patients | * 1. **Modify existing MVCS resources** to meet the needs (as identified in 1.3, 1.4) of clinicians working with cancer patients in the primary care and community sectors   2. **Brand development**   Brand and package together the Malnutrition in Cancer eLearning Program, *Understanding malnutrition and cancer* fact sheet, the *Malnutrition governance toolkit*, cancer malnutrition point prevalence study and promotional video  Identify an effective mechanism for promoting the resource package with clinicians working in primary and community care and develop an implementation plan |

Stage 3: Transform cancer malnutrition

| Objective | Strategies |
| --- | --- |
| 1. Promote the value of statewide cancer malnutrition and nutrition care standards to be mandatory and/or included within an appropriate quality framework for health services, primary care and community settings | * 1. **Conduct a review of grey and published literature**   Australian and international nutrition care standards and key performance indicators   * 1. **Identify key stakeholders**   Explore existing quality frameworks including National Safety and Quality Health Service (NSQHS) Standards, Safer Care Victoria, Royal Australian College of General Practitioners (RACGP) Standards for general practice and Community Common Care Standards  Explore cancer-specific quality frameworks including the *Victorian cancer plan monitoring and evaluation framework* and the Supportive Care Screening Project (Department of Health and Human Services)   * 1. **Identify preferred nutrition care standards according to best practice (as outlined in 3.1)**   Work with key bodies (identified in 3.2) to develop an implementation plan for identifying and including preferred nutrition care standards (identified in 3.3) within appropriate quality standards/frameworks |

## 3.2 Stakeholders

| Area | Stakeholder | Contact |
| --- | --- | --- |
| **Consumer** |  | Alan Fitzpatrick |
| **GP/GPN engagement** | Cancer Council Victoria | Amber Kelaart, Anna Boltong |
| Live Lighter | Alison McAleese |
| Primary Health Alliance / Primary Health Networks | Sue Merritt |
| Australian Cancer Survivorship Centre | Amanda Piper, Ashlee Bailey |
| OnTrac Project Manager | Judy Evans |
| Peter Mac GP Liaison | Alexis Butler |
| Royal Australian College of General Practitioners | Nicoll Heaslip |
| Australian Practice Nurse Association | Rosie Oldham |
| Primary Care Collaborative Cancer Clinical Trials | Sophie Chima |
| Victorian Primary Care Practice-based Research Network | Rachel Canaway |
| **Dietitian engagement** | MVCS Collaborative | MVCS Community of Practice |
| **Survey methodology** | Peter Mac Allied Health Researcher | Lara Edbrooke |
| Department of Cancer Experience and Research | Jo Phipps-Nelson, Allison Drosdowsky |
| Integrated Cancer Services | Kathy Quade (Western and Central Melbourne) |
| **GP education resources** | Victorian Comprehensive Cancer Centre | Michelle Barrett, Kyleigh Smith |
| Malnutrition in Cancer eLearning Program lead | Lauren Atkins |
| **Cancer rehabilitation** | Cancer Council Victoria | Jane Auchettl, Amber Kelaart |
| Australian Cancer Survivorship Centre | Amanda Piper |
| **Branding** | Peter Mac Communications team | Emma Mellon |
| Green Scribble | Jeremy Beaumont |
| **Quality frameworks** | Director of Quality at Peter Mac | Kathryn Burton, Katie Yeaman |
| Safer Care Victoria | Glenda Gorrie, Angela Thiel |
| Victorian Agency for Health Information | Paula Wilton, Carla Read |
| Screening and Preventive Health Programs | Sally Doncovio |
| Supportive Care in Cancer Refresh project | Carol Jewell |
| Dietitians Association of Australia | Annette Byron |
| NSW Nutrition Care Policy | Suzanne Kennewell |

## 

## 3.3 Limitations and deviations

The limitations of the project largely related to time constraints and the inability to achieve larger sample sizes.

| Limitation | Explanation |
| --- | --- |
| GP and GPN survey | Small sample size of general practice nurses (*n =* 10). Did not meet target response rate of *n* ≥ 20. |
|  |  |
| Deviation | Explanation |
| GP and GPN survey | GP/GPN recruitment was slow. An ethics amendment was submitted to include an incentive for completing the survey ($100 Coles Myer gift voucher) and the closing date was extended to allow recruitment at specific GP/GPN events. |
| Modify existing MVCS resources for the primary care and community sectors | Due to the extension of the closing date for the GP/GPN survey, there was insufficient time to modify resources based on the results of the survey. An implementation plan for modifying resources has been prepared. |

## 3.4 Resources utilised or developed

### Utilised

* Stakeholders from external agencies as outlined on page 14
* Existing MVCS resources including:
* Malnutrition in Cancer eLearning Program
* *Malnutrition governance toolkit*
* *Understanding malnutrition and cancer* fact sheet
* Results from the CCV project titled ‘Supporting community and private practice dietitians in managing oncology patients’

### Developed

* Literature review on malnutrition screening, management of malnutrition in primary care and community settings, and the transition of nutrition care from acute to community sectors
* Input provided by the MVCS project team into the development of a malnutrition performance measure included within the *Victorian cancer plan monitoring and evaluation framework*
* Project proposal for MVCS 2018–19 titled *Optimising the cancer nutrition path: exploring consumer and carers experiences and clinician expertise to co-design a cancer nutrition care pathway across the care continuum*
* Directory of Victorian community dietetic services incorporating an infographic outlining options for the nutrition care of cancer patients beyond hospital (see Appendix 5)
* Prolonged fasting clinical advisory (prepared by a working group comprising representation from 11 Victorian health services) submitted to Safer Care Victoria to assist in raising the profile of malnutrition as a quality and safety issue within Safer Care Victoria (Appendix 6)
* Response to the Victorian Agency for Health Information consultation paper regarding their reporting program for 2018–19, outlining the reasons why malnutrition should be included as a performance measure (Appendix 7)

## 3.5 Communication strategies

The main mode of communication has been face-to-face meetings with contacts from external agencies and engagement with the project steering committee. Achievement of key milestones have been documented in the mid and final project reports.

Dissemination of project results will be via ongoing MVCS Community of Practice meetings, distribution of the final report and report summaries to relevant stakeholders (as detailed in the deliverables report), presentation at conferences and publication in relevant journals.

Appendix 1 provides a summary of communication strategies used.

# Section 4: Evaluation

## 4.1 Summary of key results

### Stage 1: Cancer malnutrition beyond hospitals

#### Literature review

##### Nutrition risk screening in primary care

Nutrition screening is a ‘process of quickly identifying those who may be at risk of malnutrition so that a full nutrition assessment and appropriate nutrition intervention can be provided’ [17]. Evidence-based practice guidelines for managing malnutrition recommend that routine screening for malnutrition should occur in the rehabilitation and community settings to improve the identification of malnutrition risk and enable nutritional care planning [9].

A number of valid screening tools are available for use within the community setting, and the appropriate choice of screening tool requires consideration. The malnutrition screening tools validated for use in the community include: Mini Nutrition Assessment Short Form (MNA-SF); Malnutrition Universal Screening Tool (MUST); Seniors in the Community Risk Evaluation for Eating and Nutrition II (SCREEN II); Short Nutritional Assessment Questionnaire (SNAQ); and the Malnutrition Screening Tool (MST) [9, 17, 18]. Key considerations for choice of a screening tool include: who will be undertaking the screening (skill level and time to complete); the healthcare setting and patient population; and the burden of completion (number of questions, measurements, equipment and calculations that may be required) [9].

All patients referred to community health services in Victoria should be screened using the Home and Community Care (HACC) nutrition risk screening and monitoring tool. This tool consists of 10 questions to determine nutritional risk and aims to identify both under and over nutrition [19]. In Queensland a modified MST has been incorporated into the Health Behaviours Profile completed for all new HACC-eligible clients [10]. The MST was chosen because it does not require any measurements or calculations and is simple to complete (Table 1). The MST was modified with the addition of a question: *‘Client appears very underweight or frail?’* to help identify chronic malnutrition that may be present in HACC-eligible clients.

Table 1: Malnutrition Screening Tool [20]

| Question | Answer | Details | Score |
| --- | --- | --- | --- |
| A. Have you lost weight recently without trying? If yes, how much weight? | No |  | 0 |
| Yes | 1–5 kg | 1 |
| 6–10 kg | 2 |
| 11–15 kg | 3 |
| > 15 kg | 4 |
| Unsure |  | 2 |
| B. Have you been eating poorly because of a decreased appetite? | Yes |  | 1 |
| No |  | 2 |
| **Total score A + B =** |  |  |  |

The malnutrition screening practices of dietitians working with community-dwelling older adults in Australia were explored by Craven et al. in 2016 [21]. Of the 133 community dietitians who participated in the survey, 77 per cent conducted malnutrition screening. The majority of dietitians (75 per cent) reported a validated screening tool was used and the MST was most commonly used (51 per cent). Two-thirds of dietitians reported that clients found to be at risk of malnutrition frequently refused nutrition assessment.

These findings are in concordance with a study by Leggo et al. in 2008, who assessed 1,145 HACC-eligible clients using the modified MST [10]. In all, 175 (15 per cent) were identified to be at risk of malnutrition; however, only 75 (44 per cent) consented to a referral to a dietitian for a full nutrition assessment. Reasons for refusal included: patients were not concerned about their recent weight loss (*n* = 17); some felt weight loss was due to a recent hospital admission and their weight was starting to improve once discharged home (*n* = 5); other clients preferred their doctor to make the dietetic referral if necessary (*n* = 7); a few clients were already seeing a dietitian (*n* = 8).

In the Australian general practice setting nutrition screening is not routinely conducted [22]. In 2012 Flanagan et al. [23] proposed that screening for undernutrition should be incorporated into routine practice wherever possible, and into the 75+ annual health assessment. This paper provides clear guidance on the choice of screening tool for general practice and outlines management strategies that GPs can use for patients who are malnourished or at risk of malnutrition. In 2013 Hamirudin et al. [22] conducted interviews with 25 GPs and practice nurses to identify barriers and opportunities to implementing nutrition screening for older adults in primary care. Barriers to performing nutrition screening in general practice included: lack of time; patients may be unwilling to undergo screening; additional cost to the practice; low priority of nutrition; and a lack of knowledge on nutrition screening. Despite identifying a number of barriers, the incorporation of nutrition screening into the 75+ health assessment was identified as an opportunity.

##### Perceptions of general practitioners and practice nurses of their role in providing nutrition care

Nicholas et al. [24] examined the dietitian–GP interface in Newcastle, Australia. When asked to list three predominant patient conditions that present to you and that you feel require nutrition support, 80 per cent of dietitians listed malnutrition or unintentional weight loss compared with zero per cent of GPs. The conditions considered by GPs to require nutrition support were predominantly chronic diseases including diabetes, obesity and ischaemic heart disease.

GPs views regarding the provision of nutrition care were investigated by Crowley et al. in 2016 [25]. Nearly all (92 per cent) GPs were interested in supporting patients to eat well and perceived their role to include the assessment of nutritional risk. Most (89 per cent) reported being confident in providing nutrition care to prevent and manage cardiovascular disease, whereas fewer reported being confident providing nutrition advice to reduce the risk of cancer (55 per cent) or manage sarcopenia (48 per cent). Approximately half reported lack of time as the biggest barrier to providing nutrition care, and the majority (90 per cent) were interested in receiving additional education to improve their nutritional knowledge.

In 2014 Cass, Ball and Leveritt investigated practice nurse perceptions of their role and competency to provide nutrition care to patients living with chronic disease [26]. Participants perceived that the ideal role of the practice nurse is to advocate for nutrition and to provide basic nutrition care to patients. Barriers to providing nutrition care included time constraints, lack of nutrition knowledge and lack of confidence.

##### International guidelines for the management of malnutrition in the community

*A guide to managing adult malnutrition in the community* (2nd edition) provides recommendations for health professionals (GPs, community nurses, pharmacists, speech and language therapists) working in community settings in the UK [27]. The guide outlines that patients should be screened using MUST on first contact with a care setting or upon clinical concern and stratified according to the level of risk. Both medium- and high-risk patients are managed by a community nurse or GP, with clear guidelines for dietary advice and prescription of oral nutrition support. Patients should be referred to a dietitian if there is no improvement in their nutritional status or more specialist support is required.

In the Netherlands, the *National Primary Care Collaboration agreement on malnutrition* was developed to achieve bet­ter primary care for adults with or at risk of malnutrition by creating closer cooperation between GPs, nurses and dietitians [28]. The agreement outlines key responsibilities for each professional group and specifies diagnostic criteria for malnutrition.

##### Continuity of cancer care

The effective transfer of care into the primary care and community sectors is an important step in facilitating the continuity of care after completing cancer treatment [29]. Survivorship or shared care plans have been shown to increase a primary care practitioner’s knowledge about survivors’ cancer history, recommended surveillance and potential late and long-term effects [30, 31]. Shared care should be planned before discharge, and this planning process should involve the patient, specialist and relevant primary care professionals [32]. An Australian study of bowel cancer survivors concluded that there was strong support for shared care plans [31].

The literature search revealed examples of nutrition shared care models used in childhood obesity [33], diabetes [34] and mental health [35]. While there are nutrition shared care models known to be used in cancer care, no documented evidence was revealed in the literature review. In 2015 The Royal Women’s Hospital in Melbourne implemented and evaluated a model of survivorship care for women diagnosed with early endometrial cancer. Three months after surgery the patient completes a shared care plan with the assistance of a nurse. The care plan is then sent to the patient’s GP to help direct future care of their obesity-related comorbidities and to provide a schedule and guidelines for follow-up. Patients with a body mass index (BMI) over 30 were offered a one-off consultation with a dietitian to provide education and goal setting regarding weight management and, most importantly, to facilitate a referral to a community-based dietitian.

#### Survey of general practitioners and general practice nurses

##### Survey development

* A 14-item questionnaire was developed and piloted with input from the project team and steering committee. The questionnaire aimed to ascertain current knowledge, nutrition practice, nutrition governance and education needs in primary care. Ethics approval was obtained from the Peter Mac Human Research Ethics Committee.

##### Recruitment

* A combination of convenience sampling and snowballing techniques were used for survey distribution. Hard-copy questionnaires were distributed to GPs and GPNs attending relevant GP/GPN forums during the time the survey was open. Online questionnaires were distributed via e-newsletters for relevant key stakeholder groups including:
* PHNs
* Australian Practice Nurse Association (APNA)
* RACGP – Victorian Faculty
* Primary Care Collaborative Cancer Clinical Trials Group
* Victorian Primary Care Practice-based Research Network
* Peter Mac GP placement program
* Peter Mac and Eastern Health GP liaison officers.
* Twenty-two GPs and 10 GPNs completed the survey. Recruitment to the survey was slow and, despite an extension of the closing date and ethics amendment to allow an incentive for completing the survey, recruitment fell short of the target 40 respondents.
* Complete survey results can be found in Appendix 2.

##### Demographics

* The majority of respondents work within the North West Melbourne (*n =* 9, 28 per cent) and Western Victoria (*n =* 8, 25 per cent) PHNs; however, there were respondents from all six of the Victorian PHNs.

##### Survey results

**Knowledge of cancer malnutrition**

* Three-quarters of respondents rated their knowledge of cancer malnutrition as either poor or moderate (on a five-point scale). Only 6 per cent felt their knowledge of cancer malnutrition was very good.

**Nutrition practice**

* To screen for nutrition risk, respondents very often or always ask patients about appetite (72 per cent) and recent weight loss (66 per cent) but less frequently weigh the patient (35 per cent) or calculate their BMI (32 per cent). Despite this, the majority (78 per cent) of GPs and GPNs believe there are patients with cancer malnutrition going unrecognised in their practice.
* Approximately half the respondents very often or always give nutrition advice, recommend nutrition supplements and refer patients to a dietitian.

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| **Seventy-eight per cent of GPs and GPNs believe there are patients with cancer malnutrition going unrecognised in their practice.** |

**Nutrition governance**

* As seen in Figure 1, the majority (88 per cent) of respondents felt that GPs have primary responsibility for screening patients for cancer malnutrition. Respondents also felt oncologists (75 per cent) and acute oncology dietitians (63 per cent) have primary responsibility for screening patients for cancer malnutrition. Other professions listed included oncology nurses and chronic disease management nurses. Comments included: ‘Anyone in health care involved with patient care’ has responsibility for nutrition risk screening and ‘we would screen if we were seen as part of the cancer care team’.

Figure 1: Perspectives on primary responsibility for screening for cancer malnutrition

* Almost all (94 per cent) respondents would see benefit in having access to a malnutrition screening tool that could be used for all patients (not just cancer patients). Comments regarding nutrition screening tools included: ‘It would need to be quick and easy to administer’ and ‘There should be benefit to the patient by way of gaining valid information for management options’.
* On a five-point scale, 44 per cent of respondents report they always or very often complete a chronic disease management plan for patients with cancer. One-third (35 per cent) of respondents reported that these chronic disease management plans always or very often include a team care arrangement with a dietitian.
* When asked if there were any barriers to referring patients to a dietitian, common responses included cost, limited availability and patient receptiveness.

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| **Almost all (94 per cent) respondents would see benefit in having access to a malnutrition screening tool that could be used for all patients (not just cancer patients).** |

**Education needs**

* As shown in Figure 2, 84 per cent of respondents do not use or are not aware of any cancer malnutrition resources. Evidence-based guidelines or published literature were the most commonly used resources.
* The majority (91 per cent) of GPs and GPNs would like additional support, education or resources on cancer malnutrition.Popular formats for this support included a hard-copy resource (53 per cent), e-learning module (38 per cent) and an email with links to relevant resources (34 per cent).

Figure 2: General practitioner and general practice nurse use of cancer nutrition resources

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| **Ninety-one per cent of GPs and GPNs would like additional support, education or resources on cancer malnutrition.** |

#### Survey of dietitians

##### Survey development

* A 24-item questionnaire was developed and piloted with input from the project team and steering committee. The questionnaire aimed to ascertain current knowledge, nutrition practice, nutrition governance and education needs regarding cancer malnutrition in the primary care and community sectors and referral practices of acute oncology dietitians to the primary care or community setting. Ethics approval was obtained from the Peter Mac Human Research Ethics Committee.

##### Recruitment

* Victorian dietitians working in either acute cancer services (*n =* 79) or the primary care / community sector (*n =* 151) were invited to participate in the online survey via email.
* A total of 162 dietitians completed the survey. Ten surveys were incomplete and therefore excluded from analysis, leaving a final sample size of *n =* 152. Complete survey results can be found in Appendix 3.

##### Demographics

* There was good representation from each of the sectors: acute oncology dietitians (*n =* 98), community health dietitians (*n =* 59), community rehabilitation dietitians (*n =* 25) and private practice dietitians (*n =* 30). Thirty-six dietitians worked across both acute and primary care sectors.
* On average, respondents had been practising as a dietitian for 11 years (standard deviation (SD) 8.8). Dietitians working in the primary care/community sector had been practising as a dietitian for longer than those in the acute sector (mean of 12.3 years versus 10.5 years). Overall the sample was evenly split between major city and regional locations. However, there were more primary care and community dietitians working in regional locations. Table 2 provides a summary of the demographic characteristics of the sample.

Table 2: Summary of demographic characteristics of dietitian sample

| Demographic characteristic | Total | Acute | Primary care /  community | Work across both sectors |
| --- | --- | --- | --- | --- |
| Area of work | 152 | 101 | 89 | 36 |

Years practising as a dietitian

| Demographic characteristic | Total | Acute | Primary care /  community | Work across both sectors |
| --- | --- | --- | --- | --- |
| Range | 0.3–42 | 1–39 | 0.3–42 | 0.3–42 |
| Mean (SD) | 11 SD 8.8 | 10.5 SD 8.3 | 12.3 SD 9.8 | 11.3 SD 9.1 |
| Median (interquartile range) | 9 | 9 | 9.9 | 8 |

ARIA+ Index

| Demographic characteristic | Total | Acute | Primary care /  community | Work across both sectors |
| --- | --- | --- | --- | --- |
| Major city | 86 (52%) | 63 (60%) | 38 (37%) | 15 (35%) |
| Inner regional | 56 (34%) | 29 (28%) | 46 (45%) | 18 (42%) |
| Outer regional | 21 (13%) | 13 (12%) | 19 (18%) | 10 (23%) |
| Remote | 2 (1%) | – | 2 (3%) | – |
| Very remote | – | – | – | – |

##### Survey results for primary care / community dietitians

**Nutrition governance**

* Sixty-nine per cent of dietitians said their service complies with performance standards for accreditation. Of the 10 per cent of respondents who felt their service does not comply with performance standards for accreditation, the majority worked in private practice where there is no formal accreditation process. Twenty per cent of dietitians were unsure, and these respondents were evenly spread across community health, community rehabilitation and private practice.
* When asked which performance standards their service complies with, seven different performance standards were cited, indicating that governance in the primary care and community sectors is unclear to dietitians working in the area. A summary of quality frameworks across the continuum of care can be found on page 33.

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| **The majority of dietitians working in primary care/community care are unclear about what nutrition governance processes their service should comply with.** |

**Nutrition risk screening**

* Less than half (43 per cent) of respondents said their service routinely screens every new patient for nutrition risk. Respondents commented that despite the inclusion of nutrition risk screening in initial assessments, completion rates and accuracy of completion are poor.
* When responses were analysed for dietitians only working in community health, this figure was even lower, with only 26 per cent of respondents reporting their service routinely screens every new patient for nutrition risk.
* Of those services that routinely screen for nutrition risk, 69 per cent responded that they use a validated screening tool. The predominant screening tool used in the primary care and community settings was the MST (81 per cent), with a small number of services using MNA-SF (11 per cent), MUST (7 per cent) or the SCTT health and chronic conditions screen (4 per cent).
* Of those respondents whose service did not use a malnutrition screening tool, almost all reported their service uses the following flags within a common risk assessment:
* obvious underweight/frailty
* unintentional weight loss
* reduced appetite
* reduced food and fluid intake
* problems with teeth or swallowing.

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| **Sixty-three per cent of primary care / community dietitians believe there are patients with cancer malnutrition going unrecognised in their service.** |

**Nutrition assessment**

* On a five-point scale, the majority of respondents reported they very often or always weigh patients on initial assessment (84 per cent) and subsequent review (79 per cent). The majority of respondents (74 per cent) very often or always calculate BMI on initial assessment. Respondents measure height less often, with many comments that a patient’s reported height is considered accurate.

**Malnutrition diagnosis**

* As shown in Figure 3, when data from respondents only working in one sector were analysed, it can be seen that 86 per cent of dietitians working in community rehabilitation use the Subjective Global Assessment (SGA) to diagnose malnutrition, whereas 81 per cent of dietitians working in community health use clinical judgement. Dietitians working in private practice used a variety of tools.

Figure 3: Tools used to diagnose a patient with malnutrition, by sector

**Education needs**

* To understand the education needs of primary care / community dietitians, respondents were asked if they have accessed any cancer-specific education resources. As outlined in Figure 4, 61 per cent reported using evidence-based guidelines or published literature. One-third had used the CCV *Oncology resource guide for community dietitians* or the *Understanding malnutrition and cancer* fact sheet. Twenty-one per cent of respondents had used the Malnutrition in Cancer eLearning Program and only a small number (9 per cent) had used the *Malnutrition governance toolkit*. Approximately one-quarter (24 per cent) of primary care / community dietitians were not aware of specific cancer malnutrition education resources.
* Three-quarters of respondents reported they would like additional support or resources on cancer malnutrition. Popular formats for this support included webinars (45 per cent), e-learning modules (39 per cent), an email with links to relevant resources (38 per cent) and a hard-copy resource (31 per cent).

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| **Seventy-five per cent of respondents reported they would like additional support or resources on cancer malnutrition.** |

Figure 4: Dietitian use of cancer nutrition resources

#### Survey results for acute oncology dietitians

##### Transfer of care

* To understand transitional care practices, acute oncology dietitians were asked how often they refer patients to dietitians working in primary or community care. As shown in Figure 5, when looking at all respondents, responses were evenly distributed, with 32 per cent of respondents always or very often referring to dietitians in the community, 39 per cent sometimes referring and 29 per cent rarely or never referring. Interestingly when results were analysed according to location, a greater proportion (42 per cent) of acute oncology dietitians working in regional or rural locations never or rarely refer to community dietitians compared with 22 per cent of oncology dietitians working in metropolitan cancer services.
* When a referral is made, acute oncology dietitians refer the majority of their patients to community health services (81 per cent); however, a large proportion are also being referred to dietitians working in community rehabilitation (45 per cent) and private practice (26 per cent). Acute oncology dietitians are not just referring to dietitians in the primary care and community sector. They also report referring to dietitians in other acute settings including oncology day clinics and outpatient clinics, and subacute settings such as rehabilitation units.
* The predominant reason that oncology dietitians do not refer patients to dietitians in the primary care and community sectors include: ‘patients at my health service are followed up in hospital outpatients’; ‘patients continue to receive phone reviews from my health service until stable’; ‘complex care needs of patients’; ‘time/resources required to make referral’; and ‘long wait lists for community dietitian’.

Figure 5: Frequency of referral from acute oncology dietitians to dietitians working in primary care or community settings

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| **Reasons acute oncology dietitians do not refer to primary care / community dietitians include:**   * patients are followed up in hospital outpatients * patients receive phone reviews until stable * complex care needs of patients * time/resources required to make referral * long wait lists for community dietitian. |

* Acute oncology dietitians were asked how often they provide a nutrition discharge summary to the patients GP on discharge. Two-thirds (66 per cent) reported that they never or rarely provide a discharge summary (see Figure 6). Reasons included lack of time/resources, not standard practice, admission summary provided by treating medical team, and the patient does not require follow-up.

Figure 6: Provision of a nutrition discharge summary to the GP on discharge

**Cancer rehabilitation programs**

* Over half (54 per cent) of the acute oncology dietitians surveyed were aware there are a number of cancer rehabilitation programs running in Victoria. Of those dietitians who were aware of these programs, only 20 per cent had made a referral to one of these programs.
* Nearly all (95 per cent) acute oncology dietitians surveyed would like more information about cancer rehabilitation programs running in Victoria. Requested information regarding cancer rehabilitation programs included information about location, cost, waitlists, duration, eligibility criteria, access to a dietitian and how to refer.

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| **Ninety-five per cent of acute oncology dietitians would like more information about cancer rehabilitation programs running in Victoria.** |

### Stage 2: Package and translate cancer malnutrition

#### Brand development

* Items that require branding include:
* emails (email banner)
* fact sheets
* e-newsletters
* agendas and minutes
* reports and documents
* PowerPoint presentations, e-learning programs and webpages.
* After consultation with the communications team at Peter Mac and project steering committee, it was decided that branding for the MVCS program of work should consist of a ‘look and feel’ rather than a logo per se.
* A branding brief was developed in consultation with the project steering committee.

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| MVCS program branding brief  The MVCS program is:   * representing the management of malnutrition in cancer * improving the delivery of multidisciplinary nutrition care * improving nutrition practice across health sectors (hospitals, private and community care) * providing a multi-organisation collaboration/connection across Victoria * part of a program of work that has been progressing since 2011 including research, education, quality improvement and governance initiatives. |

* A graphic design company (Green Scribble) was engaged to work on a potential ‘look and feel’.
* Multiple concepts were developed, the first four concepts had a focus on food or eating (see example below).



* After discussion with the Peter Mac project team and project steering committee it was decided that the branding should focus more on collaboration and connection, rather than food or eating. The concept put forward to the designer was ‘coming to the table’, as the table it a place to both eat and collaborate.
* The name of the program of work has also been revised to the Victorian Cancer Malnutrition Collaborative (VCMC), given the program is now focusing of the management of cancer malnutrition across the continuum of care.
* The final choice of a ‘look and feel’ was by consensus of the Peter Mac project team, project steering committee and the department.

##### Final VCMC branding concept



#### Development of a cancer malnutrition resource package for clinicians working in primary and community care

The survey of acute oncology dietitians identified that the transfer of care of malnourished patients to the primary care and community sectors after completing treatment is poor. To assist with continuity of care, a directory of Victorian community dietetic services has been developed to support acute oncology dietitians with discharge planning (detailed in Table 3).

Table 3: New dietitian resource

| Resource | Target audience | Content |
| --- | --- | --- |
| Directory of Victorian community dietetic services | Acute oncology dietitians working in Victoria  (A link to the resource will be included on the Peter Mac MVCS program page) | * An infographic outlining options for the nutrition care of cancer patients beyond hospital (see Appendix 5) * Information on cancer rehabilitation programs and the availability of a dietitian within these programs (group and/or individual) * Information about Victorian community rehabilitation, community health services, private practice dietitians and CCV programs |

Existing MVCS resources were planned for modification to meet the needs of clinicians working with cancer patients in the primary care and community sectors within the project timeframe; however, more appropriate processes/projects in which to complete this work have been identified. A detailed plan, outlining suggested modifications and how/when this work will be completed is outlined in Table 4.

Table 4: Existing education resources

| Resource | Suggested modification | Plan for completion of work |
| --- | --- | --- |
| Malnutrition in Cancer eLearning Program | **General practice module:**  Rename to ‘Primary care module’ to target both GPs and GPNs  Addition of a shorter module  Greater community focus  Make it less acute-focused (take out information on malnutrition coding, PG-SGA)  Include more practical advice that a GP/GPN can give on a nourishing diet  Add information on how to find a community dietitian  Seek RACGP and APNA accreditation  **Dietitian module:**  Include a link to the CCV *Oncology resource guide for dietitians*  Consider the benefit of a primary care / community module  Look at governance in the primary care / community setting  Focus on transition to survivorship | **Who:** Lauren Atkins, Dietitian, Peter Mac  **Project:**  Planned Malnutrition in Cancer eLearning Program content update  **When:**  May–Dec 2018 |
| Malnutrition governance toolkit | 1. **Update existing toolkit:**   Survey past contributors and end users  Update exemplar policy and technical documents  Update in line with the second edition of the NSQHS Standards  Focus on malnutrition coding and documentation guidelines   1. **Add primary / community care chapter:**   Nutrition governance in primary / community care transition of care (with examples of nutrition discharge letters to GP)  Engage primary care / community stakeholders to collect exemplar documents and initiatives | **Who:**  St Vincent’s Hospital  **When:**  Planning underway |
| MVCS promotional video | Addition of MVCS branding  To be launched after the update of the Malnutrition in Cancer eLearning Program and *Malnutrition governance toolkit* | **Who:**  Lifebuoy Video  **Cost:**  $660 (inclusive of GST) |
| Understanding malnutrition and cancer fact sheet | Is the content appropriate to be used as an education resource by dietitians?  Is it suitable for culturally diverse patients?  Is the content suitable to be used by GPs/GPNs? | **Who:** Jane Stewart, Dietitian, Peter Mac  **Project:** Cultural adaptation of MST project  **When:**  Aug 2018 – Aug 2019 |

* This project has identified a number of new resources that would help identify and manage cancer malnutrition across the continuum of care. A detailed plan for their development is outlined in Table 5.

Table 5: Proposed new health professional education resources

| Resource | Content | Plan for completion of work |
| --- | --- | --- |
| Cancer malnutrition pathway for primary care | Develop a cancer malnutrition management pathway specifically for GPs and GPNs  Consider both a paper-based and web-based (health pathways) tool | **Who:** Project manager  **Project:**  Optimising the Cancer Nutrition Path project  **When:**  Aug 2018 – Oct 2019 |
| Understanding malnutrition and cancer fact sheet for health professionals | Use the current patient fact sheet and modify it to meet the needs of health professionals  Consider including the MST (or link to the web-based tool developed in the project for culturally diverse patients) | **Who:** Project manager  **Project:**  Optimising the Cancer Nutrition Path project  **When:**  Aug 2018 – Oct 2019 |
| Practical nutrition advice for GPs and GPNs | Consider developing a fact sheet including practical nutrition strategies that GPs and GPNs can use with their patients | **Who:** Project manager  **Project:**  Optimising the Cancer Nutrition Path project  **When:**  Aug 2018 – Oct 2019 |

#### Implementation plan for disseminating the cancer malnutrition resource package for primary and community care

Table 6 outlines a plan for promoting and implementing the resource package completed as part of this project.

Table 6: Plan to promote and implement the resource package

| Target audience | Agency | Action | Person responsible |
| --- | --- | --- | --- |
| **Primary care / community dietitians** | Community health services and community rehabilitation | Email with links to resources | Jane Stewart, email to be sent after the August Community of Practice |
| Private practice | Email with links to resources |
| Victorian nutrition managers | Email with links to resources |
| Dietitians Association of Australia (DAA) | DAA weekly newsletter – link to Malnutrition in Cancer eLearning Program  Promote in the Oncology discussion forum  Plan to present project at 2019 DAA national conference | Jane Stewart, draft article to be completed June 2018  Peter Mac project team  Jane Stewart |
| Dietitian Connection | Investigate option for advertising or feature article | Jane Stewart |
| Education in Nutrition | Investigate option for advertising or feature article |
| **Allied health professionals working in primary care / community sector** | Occupational Therapy Australia  Australian Physiotherapy Association  Speech Pathology Australia  Australian Association of Social Workers  Australian Psychological Society | Investigate options for news article | Jane Stewart |
| **Community and primary healthcare nurses** | Bolton Clarke (Royal District Nursing Service) | Submit news article | Jane Stewart, draft article to be completed June 2018 |
| APNA | Submit article for the e-newsletter / *Primary Times* magazine  Present project at 2019 APNA national conference | Jane Stewart, draft article to be completed June 2018  Jane Stewart |
| **GPs** | RACGP | Submit article for the e-newsletter | Jane Stewart, draft article to be completed June 2018 |
| HealthEd GP newsletter | Submit an article to the newsletter |
| **GP liaison officers** | Community Health Services | Distribute a letter advertising the resource package to GP liaison officers via the practice manager of every Victorian community health centre | Jane Stewart, August 2018 |
| **Clinicians working in community and primary care** | CCV | Confirm opportunities for promotion and distribution of MVCS resources to GPs/GPNs via the I-PACED project | Jane Stewart |
| Primary Health Networks | Upload resources onto health pathways Melbourne oncology resources page | Jane Stewart to liaise with NWM PHN clinical editor when updated resources complete |
| Victorian Comprehensive Cancer Centre | Add links to resources in the Cancer Survivorship for Primary Care Professionals Massive Open Online Course | Jenelle Loeliger to liaise with project team once updated resources complete |

#### Platform for resources

* Update the Cancer Strategy and Development ‘Cancer projects’ page (Department of Health and Human Services website) to include links to:
* Malnutrition in Cancer eLearning Program
* *Malnutrition governance toolkit*
* MVCS promotional video
* CCV *Understanding malnutrition and cancer* fact sheet for patients
* Update the Peter Mac MVCS program page to include links to:
* Malnutrition in Cancer eLearning Program
* *Malnutrition governance toolkit*
* MVCS promotional video
* CCV *Understanding malnutrition and cancer* fact sheet for patients
* CCV *Understanding malnutrition and cancer* fact sheet for clinicians
* CCV *Oncology resource guide for dietitians*
* electronic version of the MST (both English and culturally adapted versions)
* Request links to the following resources be added to the Health Pathways Melbourne cancer resources page:
* Malnutrition in Cancer eLearning Program
* CCV *Understanding malnutrition and cancer* fact sheet for patients
* CCV *Understanding malnutrition and cancer* fact sheet for clinicians
* electronic version of the MST (both English and culturally adapted versions)

### Stage 3: Transform cancer malnutrition

#### Summary of quality frameworks across the continuum of care

In Australia there are a number of quality frameworks that apply to different health sectors across the continuum of care. Figure 7 provides a summary of these frameworks and indicates the sectors for which they apply.

Figure 7: Quality frameworks across the continuum of care

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Quality framework |  | Sector | | | | | | | | |
|  |  |  |  |  |  |  |  |  |
| **Acute care** |  | **Community rehabilitation** |  | **Community health centre (integrated)** |  | **Community health centre**  **(stand-alone)** |  | **Primary care** |
|  |  |  |  |  |  |
| **NSQHS Standards** |  |  |  |  |  |
|  |  |  |  |  |  |
| **EQuIP National** |  |  |  |  |  |
|  |  |  |  |  |  |
| **Home Care Common Standards** |  |  |  |  |  |
|  |  |  |  |  |  |
| **QIC Health and Community Service Standards** |  |  |  |  |  |
|  |  |  |  |  |  |
| **Aged Care Quality Standards** |  |  |  |  |  |
|  |  |  |  |  |  |
| **RACGP Standards for General Practitioners** |  |  |  |  |  |  |  |  |  |  |
|  | | | | | | | | | | |
| **DAA Accredited Practising Dietitian program** |  |  |  |  |  |  |  |  |  |  |

#### Summary of quality frameworks and nutrition care standards

Table 7 summarises the nutrition standards included within relevant quality frameworks across the continuum of care.

Table 7: Nutrition standards included within relevant quality frameworks

| Quality framework | Sector | Voluntary/ mandatory | Nutrition standard |
| --- | --- | --- | --- |
| **NSQHS Standard 2nd edition** [36] (ACSQHC)  Effective 1 Jan 2019 | All health services providing acute and subacute care | Mandatory | Conduct screening on admission and weekly during an episode of care, if care changes, or if the patient’s condition changes  Consider nutrition risk such as malnutrition and dehydration, dysphagia, special dietary needs, food intolerance or allergy  A comprehensive nutrition assessment is completed (in partnership with the patient, carers and families) for those patients identified as at nutrition risk  Document the results of nutrition risk screening and assessment  Ensure that the nutrition care for each patient is planned and documented  Consider the need for nutritional support such as oral nutrition supplements, enteral or parenteral nutrition |
| **EQuIP National** [37] (ACHS) | Hospitals and day procedure centres | Voluntary | Includes the 10 NSQHS standards, with an additional five standards focusing on the performance of non-clinical systems  See above for NSQHS nutrition standards |
| **QIC Health and Community Service Standards 7th edition** [38] (QIP) | Community-based services | Voluntary | No nutrition standards |
| **Home Care Common Standards v 14** [39] (AACQA) | All HACC-funded services | Mandatory | No specific nutrition standard  Standard 2.2 – Assessment  Each service user participates in an assessment appropriate to the complexity of their needs and with consideration of their cultural and linguistic diversity  Superseded by the Aged Care Quality Standards on 1 July 2018 |
| **Residential Aged Care Standards** [40] (AACQA) | All providers of residential aged care | Mandatory | Standard 2.10 – Nutrition and Hydration  Care recipients receive adequate nourishment and hydration  Superseded by the Aged Care Quality Standards on 1 July 2018 |
| **Aged Care Quality Standards [41]** (AACQA)  Effective 1 July 2018 | All providers of residential, transitional and home-based aged care | Mandatory | No nutrition standard – DAA working to get nutrition/malnutrition included in supporting documents  Standard 3.3 – Effective management of high-impact or high-prevalence risks associated with the care of each consumer |
| **National Aged Care Quality Indicator Program [42]** (My Aged Care) | All providers of residential aged care | Voluntary | Three quality indicators focusing on clinical areas  Quality Indicator 3 – Unplanned weight loss  Measure 1: Significant unplanned weight loss  Measure 2: Consecutive unplanned weight loss |
| **RACGP Standards for General Practitioners 5th edition** [43] (AGPAL) | All general practices | Mandatory | No nutrition standards |
| **Accredited Practicing Dietitian Program** (DAA) | All practising dietitians | Voluntary | No nutrition standards |

#### Summary of Australian and international nutrition performance measures for health services

Within Victoria there are no centralised state-led performance measures for nutrition. Most health services will have local quality programs in place reporting on the nutrition care of their patients; however, these vary between health services.

Examples of centralised state or national nutrition performance measures have been outlined in Tables 8 and 9.

Table 8: Australian nutrition performance measures for health services

| Organisation | Performance measure | Voluntary / mandatory | Data source |
| --- | --- | --- | --- |
| Nutrition care policy  (NSW) [44] | The policy has a number of mandatory requirements:  height/length and weight assessment  malnutrition screening  nutrition assessment of all malnourished or at-risk patients  documentation of a nutrition care plan  minimising fasting times  planning and delivery of food and fluids  mealtime environment/assistant to eat and drink  transfer of care  a system to evaluate nutrition is provided including reporting on: height and weight documentation; nutrition screening and assessment | Mandatory | Manual audit |
| Bedside audit tool  (Qld) | Percentage of patients who have:  admission weight documented  length of stay (LOS) > 7 days with follow-up weight documented  nutrition risk screening completed on admission  repeat nutrition risk screen completed when LOS > 7 days  been identified as at risk and have nutritional needs documented in their care plan  been identified as at risk with a hospital-acquired pressure injury  reported receiving the assistance needed with their last meal  reported missing a meal in the past 24 hours | Voluntary | Manual audit |

Table 9: International nutrition performance measures for health services

| Organisation | Performance measure | Voluntary / mandatory | Data source |
| --- | --- | --- | --- |
| British Association of Parenteral and Enteral Nutrition  (UK) [45] | Nutrition care tool:  The individual was screened with a validated screening tool (‘MUST’) on entry to care setting  The individual was re-screened with a validated screening tool (‘MUST’) at the time interval (weekly, monthly) appropriate to the care setting  Individuals found to be at risk on their last nutritional screening have a documented nutrition care plan appropriate to the organisation and setting  An appropriate nutrition care plan is being followed or has been offered to the individual  The patient’s weight in kilograms is recorded at the time of survey  Has the patient received all the food and drink and/or nutritional care they have needed?  Has the patient received assistance to eat and drink if required? | Voluntary | Manual audit |
| Academy of Nutrition and Dietetics  (USA) [46] | Electronic clinical quality measures used by The Centers for Medicare and Medicaid Services:  Completion of a malnutrition screening within 24 hours of admission  Completion of a nutrition assessment for patients identified as at risk for malnutrition within 24 hours of a malnutrition screening  Nutrition care plan for patients identified as malnourished after a completed nutrition assessment  Appropriate documentation of a malnutrition diagnosis | Mandatory | Electronic Medical Records |
| Dutch Malnutrition Steering Group (Netherlands) [47] | National clinical indicators  Malnutrition screening:  All patients ≥ 18 years need to be screened within 24 hours after admission. Screening should be performed with a validated screening tool  Treatment of malnutrition:  The percentage of malnourished patients with an adequate protein intake (defined as: 1.2 – 1.5 grams/per kg/day) at the fourth day of hospital admission | Mandatory | Manual audit |
| Canadian Malnutrition Task Force  (Canada) [48] | Integrated Nutrition Pathway for Acute Care (INPAC) audit tool:  All patients screened within 24 hours of admission  All patients identified to be at nutrition risk are assessed using SGA to confirm diagnosis of malnutrition  All malnourished patients receive a comprehensive nutrition assessment conducted by a dietitian  All patients have their food intake monitored  All patients have their weight recorded weekly  All malnourished patients who do not fully recover their nutritional status during their admission require ongoing care in the community (discharge planning) | Voluntary | Manual audit |

#### Suggested nutrition care standards for Victoria

Based on current practice in Victoria and investigation into existing standards in other jurisdictions (nationally and internationally) the following nutrition care standards have been proposed:

|  |
| --- |
| 1. All patients screened for malnutrition using a validated tool within 24 hours of admission and weekly during admission thereafter. 2. All patients at risk of malnutrition should have a documented nutrition care plan in place within 24 hours of malnutrition screening. 3. All malnourished patients should have a diagnosis of malnutrition appropriately documented in their medical record. 4. All malnourished patients who do not fully recover their nutritional status during their admission require ongoing care in the community. |

#### Promote the value of statewide nutrition care standards

During the course of this project a number of key stakeholder groups have been engaged to promote the value of statewide nutrition care standards (outlined in Figure 8). A summary of actions undertaken to promote the value of statewide nutrition care standards can be found in Appendix 4.

Figure 8: Key stakeholders relating to statewide nutrition care standards

#### Key outcomes

* A number of meetings have taken place to raise the profile of malnutrition as a quality and safety issue within SCV and the Victorian Agency for Health Information (VAHI). It has become apparent that before developing a statewide malnutrition clinical indicator, the data source for this indicator needs to be considered. In Victoria the only centralised statewide dataset that includes nutrition information is the Victorian Admitted Episode Dataset (VAED). The nutrition data available in the VAED includes:
* the number of patients coded as having malnutrition
* the number of patients who received care by a dietitian.
* Unfortunately, there are known issues with the integrity of the malnutrition coding data in the VAED. Alongside the MVCS cancer malnutrition point prevalence study conducted in 2012, the percentage of patients coded in the VAED as having malnutrition was analysed for a matched cohort within the same financial year. While the prevalence of malnutrition for inpatients in the point prevalence study was 57 per cent, only 7 per cent of patients from the VAED matched cohort were coded as having malnutrition [49]. Multiple factors were identified as contributing to this including: malnutrition screening; referral to a dietitian; assessment by a dietitian and diagnosis of malnutrition; appropriate documentation of malnutrition; and coding for malnutrition. There is no recent data regarding the accuracy of VAED coding for malnutrition.
* A malnutrition performance indicator has been included within the *Victorian cancer plan monitoring and evaluation framework*. This is a significant step forward because the prevalence of cancer malnutrition (as captured by VAED malnutrition coding) will now be reported on for every Victorian cancer service within this framework. The indicator is as follows:

|  |  |
| --- | --- |
| Indicator | The prevalence of malnutrition in cancer patients |
| Measure | Proportion of patients admitted for primary cancer treatment who have been coded as having malnutrition |
| Definition | Numerator: Number of adults aged 18 years or older admitted as acute care inpatients for primary cancer treatment or related care who were coded as having malnutrition.  Denominator: Number of adults aged 18 years or older admitted as acute care inpatients for primary cancer treatment or related care  Mode: Proportion |

* Further discussions have occurred since the submission of the above indicator with the senior health information management advisor at VAHI, who has indicated the wording of this measure should be revised to ensure that only data for patients admitted to an inpatient ward (not chemotherapy day patients) is extracted from the VAED. The revised wording is outlined below and will be further discussed with the department’s Screening and Cancer Prevention Unit.

|  |  |
| --- | --- |
| Measure | Proportion of admitted cancer patients with an LOS > 1 day who have been coded as having malnutrition |
| Definition | Numerator: Number of acute separations of adults aged 18 years with a cancer code as either the principal diagnosis or an additional diagnosis and a malnutrition code  Denominator: Number of acute separations of adults aged 18 years with a cancer code as either the principal diagnosis or an additional diagnosis |

* There is broad agreement from the MVCS Community of Practice (CoP) and key stakeholders within the department that developing a nutrition care policy for Victoria could be beneficial and should be investigated further. This will be pursued further with SCV.

## 4.2 Wins and gains

* Engagement by dietitians across all sectors was excellent and the response rate to the dietitian survey exceeded expectations. Using mail merge to send out personalised emails inviting dietitians to participate in the survey appears to be a highly effective mechanism for survey recruitment.
* Both dietitian and GP/GPN surveys were effective in highlighting gaps in practice – most notably, the transition of nutrition care between acute and community sectors is poor.
* Great stakeholder engagement, including engagement of steering committee members. A great achievement was the number of different avenues identified for including nutrition care standards within quality frameworks.
* Opportunities to promote awareness of malnutrition as a general health concern and improve clinical care by using cancer malnutrition as an example of a particularly high risk and vulnerable group. The findings of this project can be applied more broadly and are transferrable to other patient populations.

## 4.3 Issues and challenges

* Engagement of GPs and GPNs proved to be difficult, resulting in a survey response rate below target. Even with the addition of an incentive for participants, advertising in e-newsletters of key stakeholder groups proved reasonably inefficient. Recruitment of participants attending education events was far more effective (which was identified in the planning stage); however, limited education events were delivered during the time the survey was open.
* The task of promoting the value of statewide malnutrition performance indicators has proved challenging, given the limited choices for a centralised statewide data source. The performance measure included within the *Victorian cancer plan monitoring and evaluation framework*, using data from the VAED, is a step in the right direction in holding Victorian cancer services accountable for identifying and managing malnourished patients. At this time, the preferred malnutrition performance indicators cannot be implemented because no centralised data source exists containing this level of nutrition information. Further investigation is needed

# Section 5: Future directions

## 5.1 Sustainability

* Results from the dietitian and GP/GPN surveys have already been used to inform the next MVCS project ‘Co-design of a cancer nutrition care pathway’, and some details from the survey results will help to inform the direction of this new project.
* Relationships have been built with key stakeholders from organisations such as SCV and VAHI and progress made with submissions such as the *Prolonged fasting clinical advisory* (Appendix 6). The Peter Mac project team will continue to progress recommendations for the malnutrition performance measure within the *Victorian cancer plan monitoring and evaluation framework*.
* The August MVCS CoP will attempt to engage dietitians working with malnourished cancer patients across the continuum of care. The MVCS CoP will therefore provide an ongoing avenue to promote the MVCS resource package for clinicians working in primary and community care and further progress this program of work.
* Conference presentations and dissemination of findings will occur according to the dissemination plan. In addition, submitting a manuscript summarising the findings of this project to relevant journals is planned to ensure broad dissemination and sharing of results.

## 5.2 Next steps for project locally

* The project lead will submit an annual progress report to the Peter Mac Ethics Committee for the dietitian and GP/GPN survey component of the project.
* The project results will be presented at the August MVCS CoP meeting.
* An abstract will be submitted for the Clinical Oncological Society of Australia (COSA) 2018 Annual Scientific Meeting and the Dietitians Association of Australian (DAA) 2019 annual conference with a focus on managing cancer malnutrition in the primary care and community settings.
* Opportunities to present this project at other suitable conferences will be pursued as they are identified, such as the Australian Practice Nurse Association 2019 annual conference and the RACGP Conference for General Practice (GP19).
* The project manager is available to support the modification and branding of existing MVCS resources and implementation of the resource package.
* The Peter Mac project team will be available for ongoing work regarding promoting the value of appropriate malnutrition clinical indicators.

# Section 6: Overview of project impact

## 6.1 Impact of project

This project has highlighted that:

* Clinicians working in the primary care and community sector would benefit from targeted education regarding cancer malnutrition.
* The transition of care of at risk and/or malnourished cancer patients post treatment from the acute sector to primary care and community sectors is poor and improvements are needed.
* Nutrition governance in the primary care and community sector is lacking and clinicians are unclear about current practice.

## 6.2 Summary of key learnings

### Management of cancer malnutrition in primary care and community settings

* GPs and GPNs have limited knowledge of cancer malnutrition, and the majority (91 per cent) would like additional support, education or resources on cancer malnutrition.
* Eighty-eight per cent of GPs and GPNs believe they should have primary responsibility for screening patients for malnutrition, and almost all (94 per cent) would see benefit in having access to a validated malnutrition screening tool to help assess a patient’s nutrition risk.
* Nutrition risk screening is routinely completed on initial presentation in less than half (43 per cent) of services in the community sector. When nutrition risk screening is completed, the Malnutrition Screening Tool (MST) is the screening tool predominantly used.
* Seventy-eight per cent of GPs and GPNs and 63 per cent of dietitians working in primary care or community settings believe there are patients with cancer malnutrition going unrecognised in their service.
* Despite there being a range of cancer malnutrition education resources specifically for dietitians, these resources are poorly accessed by dietitians working in primary care and community settings, with a quarter of dietitians surveyed not aware of these resources. The majority (75 per cent) of respondents reported they would like additional support or resources on cancer malnutrition.
* Only a small number (9 per cent) of dietitians working in the primary care and community sectors reported using the *Malnutrition governance toolkit*. This is not surprising because the tool was developed for health service clinicians and has an acute health service focus.
* Nutrition governance in the primary care and community sectors is complicated. There are a number of quality frameworks for this sector; however, only those community health centres and community rehabilitation services integrated with a health service are required to meet nutrition care standards.

### Transition of care post treatment

* Thirty per cent of acute oncology dietitians rarely or never refer their patients to dietitians in the primary care or community sector. Approximately half of respondents reported providing follow-up care in outpatient clinics or over the phone. Reasons for not referring patients to dietitians in the primary care and community sectors include the complex care needs of patients, the time/resources required to make the referral, long wait lists and because they don’t know where to refer.
* Only 54 per cent of acute oncology dietitians were aware of cancer rehabilitation programs running in Victoria, and only 20 per cent of dietitians who were aware of these programs have made a referral.
* GPs are unlikely to receive nutrition information for malnourished cancer patients at the completion of treatment, with two-thirds of acute oncology dietitians reporting they never or rarely provide a discharge summary to GPs.

### Cancer malnutrition education resources for the primary care and community sectors

* Existing MVCS education resources require modification and targeting for the primary care and community sectors.

### Transform cancer malnutrition

* The nutrition information captured by the VAED is the only centralised statewide data source that can be used to develop statewide nutrition performance indicators.
* A malnutrition performance indicator has been included within the *Victorian cancer plan monitoring and evaluation framework*.
* Ongoing work is required to promote the value of statewide malnutrition performance indicators and the development of a nutrition care policy for Victoria.

## 6.3 Recommendations

1. Efforts should be made to improve the identification of nutrition risk and management of malnutrition in general practice. This should include improving access to a validated malnutrition screening tool and implementing appropriate malnutrition risk screening at first presentation to general practice and on transition back into primary care after treatment. Malnutrition management could be improved by promoting the use of chronic disease management plans and incorporating team care arrangements with dietitians to better support the nutritional management of malnourished patients in primary care.
2. Improvements must be made to improve the transition of nutrition care for patients with cancer malnutrition between sectors. Acute oncology dietitians should be encouraged to provide GPs with nutrition information on discharge and supported to refer appropriate patients into the primary care and community sectors upon completion of treatment. It is important to capture the voice of patients with cancer malnutrition and their carers to better define what consumers want regarding their nutrition care. The co-design of a cancer nutrition care pathway within the next MVCS project will help achieve this and should assist in giving clinicians the knowledge and confidence to know how (and in which setting) patients with cancer malnutrition should be managed.
3. There is a need for targeted cancer malnutrition education resources for health professionals working in the primary care and community sector. This includes: specific general practice and community modules within the Malnutrition in Cancer eLearning Program; and development of an *Understanding malnutrition and cancer for health professionals* fact sheet (incorporating a malnutrition screening tool) that can be used for any clinician working with cancer patients, but will specifically fill a need for health professionals working in primary care.
4. Further work should be undertaken to better understand the data gaps between the percentage of patients coded for malnutrition in the VAED and the actual prevalence of malnutrition. This could be investigated alongside the 2018 cancer malnutrition point prevalence study.
5. Continue to explore possibilities for a statewide malnutrition clinical indicator and the development of a nutrition care policy for Victoria; and work with relevant bodies to ensure that nutrition care standards are included within quality frameworks relevant to the primary care and community sectors.
6. Leverage what we now know and have learnt regarding cancer malnutrition to other high-risk groups and/or the general population.

# Appendix 1: Communication strategy

| Communication actions | Tasks | Key messages | Target audience | Target completion date | Responsibility |
| --- | --- | --- | --- | --- | --- |
| Access to project documents | All relevant project documents to be circulated to steering committee members via email | Documents may include project plan, meeting minutes, project reports | Project steering committee | As project documents completed | Jane Stewart |
| Cancer Strategy and Development (Department of Health and Human Services) | Oversight of project and achievement of project deliverables | Discuss project progress, problems and questions  Clarify responsibilities of stakeholders | Marita Reed | Monthly | Jane Stewart / Jenelle Loeliger |
| Peter Mac project team | Oversight of project and achievement of project deliverables | Discuss project progress, problems and questions  Clarify responsibilities of stakeholders | Peter Mac project team | Fortnightly | Jane Stewart |
| Project steering committee | Oversight of project and achievement of project deliverables | Encourage stakeholder participation  Discuss project progress, problems and questions | Project steering committee | Every 6–8 weeks | Jane Stewart |
| e-newsletter | Regular communication with key stakeholders | Update stakeholders on project progress | MVCS collaborative + key stakeholders | Dec 2017  Feb 2018  May 2018  Jun 2018 | Jane Stewart / Jenelle Loeliger |
| Community of Practice | Present on project progress | Update stakeholders on progress of project | MVCS collaborative + key stakeholders | 31 Jan 2018  2 May 2018  31 Aug 2018 | Jenelle Loeliger / Jane Stewart |
| Project reports | Complete project plan, mid-project report and final project report | Report on progress of key tasks and deliverables | DHHS  MVCS CoP  Key stakeholders as identified by steering committee | Project plan: 8 Dec 2017  Mid-project report: 9 Mar 2018  Final report: 15 Jun 2018 | Jane Stewart |
| Communicate outcomes of project to key stakeholders | Distribute final project report  Prepare e-newsletter to be distributed to relevant professional bodies | Project outcomes | Key stakeholders  DAA, RACGPs, APNA | June 2018 | Jane Stewart |
| Communicate outcomes of the project to the wider community | Presentation of project outcomes throughout the dietetic and cancer professions | Project outcomes | Relevant/potential conferences:  COSA conference  DAA conference  GP19 conference  APNA conference | Abstract submission:  Aug 2018  Nov 2018  Mar 2019  Mar 2019 | Jane Stewart / Janelle Loeliger |
| Communicate outcomes of the project to the wider community | Consideration of journal publication as relevant | Project outcomes | TBC | TBC | Jane Stewart / Jenelle Loeliger |

# Appendix 2: Complete results of general practitioner and general practice nurse survey

Q1. Please indicate your profession (*n* = 32)

| Profession | Responses | Percentage |
| --- | --- | --- |
| General practitioner | 22 | 69% |
| General practice nurse | 10 | 31% |

Q2. Which Primary Health Network (PHN) does your service/practice belong to? (*n* = 32)

| PHN | Responses | Percentage |
| --- | --- | --- |
| Gippsland | 2 | 6.25% |
| Murray | 3 | 9.38% |
| Eastern Melbourne | 4 | 12.5% |
| North Western Melbourne | 9 | 28.10% |
| South Western Melbourne | 6 | 18.75% |
| Western Victoria | 8 | 25% |

Q3. How would you rate your knowledge of cancer malnutrition? (*n =* 32)

| Poor | Moderate | Good | Very good | Extremely good |
| --- | --- | --- | --- | --- |
| 18.75% | 56.25% | 18.75% | 6.25% | 0% |

Comments:

* Had previously worked in oncology and this is something that is sometimes screened for but we have no tools
* Past experience in oncology and palliative care
* Related to cancer itself (neuroendocrine effect), swallowing difficulties, ctx/rtx related

Q4. When seeing patients with cancer, how often would you? (*n =* 32)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Response | Never | Rarely | Sometimes | Very often | Always |
| Weigh the patient | 0% | 22% | 44% | 16% | 19% |
| Calculate BMI | 0% | 31% | 38% | 13% | 19% |
| Ask about recent weight loss | 0% | 9% | 25% | 44% | 22% |
| Ask about the patient’s appetite | 0% | 3% | 25% | 41% | 31% |
| Recommend nutrition supplement drinks | 6% | 13% | 34% | 44% | 3% |
| Give nutrition advice | 3% | 19% | 31% | 41% | 6% |
| Refer the patient to a dietitian | 9% | 16% | 31% | 31% | 13% |

Q5. Do you believe that there are patients with cancer malnutrition going unrecognised in your service/practice? (*n =* 32)

| Response | Number (percentage) |
| --- | --- |
| Yes | 25 (78%) |
| No | 7 (22%) |

Comments:

* Unsure
* We would always pick this up as we monitor our patients very closely
* Patient can be missed as they move between providers
* They have other concerns to see the GP for
* Recent lady with mouth ulcers – has been eating only ice-cream for ages before this
* Yes, there would be some patients that are missed (3)
* Can be missed due to time constraints or, if recognised, have limited access to services
* Most definitely given it is increasingly being noted as a measure of poorer prognosis

Q6. Who do you consider has primary responsibility for screening patients for cancer malnutrition? (*n =* 32)

| Response | Number (percentage) |
| --- | --- |
| GPs | 28 (88%) |
| Oncologist | 24 (75%) |
| Hospital dietitians | 20 (63%) |
| Primary care / community dietitians | 16 (50%) |
| GPNs | 10 (31%) |
| Other, please specify | 3 (9%) |

Comments:

* Anyone in health care involved with patient care
* Chronic disease management nurse
* I think all have an equal role
* Time constraints may impede attention to detail in this area as they are already complicated and time-consuming patients
* Chemo units
* Oncologists/acute team are managing patients – aren’t always referred back
* Oncology nurses
* We would if we were actually seen as part of the cancer care team
* Now that the issue has been brought to my attention, I feel that GPs (and their clinic nurses) are best place to screen these patients
* GP is still the ‘medical home’, which implies taking a universal holistic approach to assessing and caring for the patient

Q7. Would you see benefit in having access to a malnutrition screening tool that could be used for all patients, as well as cancer patients? (*n* = 32)

|  |  |  |
| --- | --- | --- |
| Response | Percentage | |
| Yes | | 94% |
| No | | 6% |

Comments:

* We do use an informal screener at the moment, but any new tools would be beneficial
* Tools take time though and there is never much of that
* Screening tools can be very useful. I would firstly like to see what form a malnutrition screening tool would take before making a judgement. For example, there would need to be a benefit for the patient to perform this screening as well as a benefit to the health professional by way of gaining valid information for management options
* Problem is time to do it, and there may not be payment for PN to do assessment unless it can be done as 10997
* Because we don’t see the patients during treatment
* Can be easily administered
* Possibly

Q8. As cancer can be a chronic disease, how often would you complete a chronic disease management plan for patients with cancer? (*n* = 32)

| Never | Rarely | Sometimes | Very often | Always |
| --- | --- | --- | --- | --- |
| 3% | 9% | 44% | 28% | 16% |

If you answered never/rarely, why is this the case?

* We don’t actually see the cancer patient very often, usually oncologist and surgeon
* Not enough. GPs are not referring many cancer patient to me
* 3–6 monthly
* Yes if it becomes chronic and they return to our care
* They are busy enough attending hospital appointments, chemotherapy, etc.

Q9. How often do your chronic disease management plans for patients with cancer include a Team Care Arrangement with a dietitian? (*n* = 32)

| Never | Rarely | Sometimes | Very often | Always |
| --- | --- | --- | --- | --- |
| 6% | 16% | 44% | 19% | 16% |

Comments:

* Usually already being managed by hospital dietitian
* Patients only have five visits per year so we have to prioritise
* Just about always

Q10. Are there barriers to referring your patients to a dietitian? (*n =* 32)

| Responses |
| --- |
| Limited availability / wait times (11)  Patient receptiveness to see a dietitian (7)  Cost (8)  GP referral (time constraints) (3)  Expectation patients are managed by acute team (1)  Dietitian professional experience (3) |

Q11. Please indicate if you have used any of the following cancer malnutrition resources (please select all that apply) (*n* = 32)

| Response | Number (percentage) |
| --- | --- |
| Malnutrition in Cancer eLearning Program (eviQ) | 1 (3%) |
| Malnutrition governance toolkit | 0 (0%) |
| Peter Mac oncology nutrition resource manual | 2 (6%) |
| CCV Oncology resource guide for dietitians | 0 (0%) |
| CCV Understanding malnutrition and cancer fact sheet | 2 (6%) |
| Evidence-based guidelines or published literature | 5 (16%) |
| I do not use / am not aware of any cancer malnutrition resources | 27 (84%) |
| **Comment:** Will look into the above |  |

Q12. Would you like additional support, education or resources on cancer malnutrition (*n* = 32)

| Response | Number (percentage) |
| --- | --- |
| Yes | 29 (91%) |
| No | 3 (9%) |

Q13. In what format would you like support, education or resources? (*n* = 32)

| Response | Number (percentage) |
| --- | --- |
| Webinar | 3 (9%) |
| E-learning module | 14 (38%) |
| Hardcopy resource | 17 (53%) |
| Training course | 5 (16%) |
| Email with links to relevant resources | 11 (34%) |
| Other | 5 (16%) |

Comments:

* A resource that can easily be kept up to date
* Face-to-face meeting with dietitians
* Updated website with useful patient resources as part of a bigger cancer survivorship program would be ideal
* I think a training course would be valuable to then be able to fully utilise the recommended resources

Q14. Bearing in mind the purpose of this survey (to develop cancer malnutrition resources for clinicians working in the primary care and community sector), do you have any comments or suggestions to help us achieve our goals?

|  |
| --- |
| Response |
| Easy to use and access (4)  Regular training/education (8)  Management flow chart (8) |

# Appendix 3: Complete results of the dietitian survey

## Response statistics

| Measure | Primary care /  community | Acute | Work across acute and community | Total |
| --- | --- | --- | --- | --- |
| Number of dietitians invited to complete survey | 151 | 79 | – | 230 |
| Total number of surveys completed | 55 | 68 | 39 | 162 |
| Incomplete surveys (not included in results) | 2 | 5 | 3 | 10 |
| Number of surveys included in response rate | 53 | 65 | 36 | 152 |
| Response rate | 35% | 83% | – | 66% |

Sector of work

| Demographic characteristic | Total | Acute | Primary care /  community | Work across both sectors |
| --- | --- | --- | --- | --- |
| Area of work | 152 | 101 | 89 | 36 |

Years practising as a dietitian

| Demographic characteristic | Total | Acute | Primary care /  community | Work across both sectors |
| --- | --- | --- | --- | --- |
| Range | 0.3–42 | 1–39 | 0.3–42 | 0.3–42 |
| Mean (SD) | 11 SD 8.8 | 10.5 SD 8.3 | 12.3 SD 9.8 | 11.3 SD 9.1 |
| Median (interquartile range) | 9 | 9 | 9.9 | 8 |

ARIA+ Index

| Demographic characteristic | Total | Acute | Primary care /  community | Work across both sectors |
| --- | --- | --- | --- | --- |
| Major city | 86 (52%) | 63 (60%) | 38 (37%) | 15 (35%) |
| Inner regional | 56 (34%) | 29 (28%) | 46 (45%) | 18 (42%) |
| Outer regional | 21 (13%) | 13 (12%) | 19 (18%) | 10 (23%) |
| Remote | 2 (1%) | – | 2 (3%) | – |
| Very remote | – | – | – | – |

Area of work

| Area | Number (percentage) |
| --- | --- |
| Acute | 98 (64%) |
| Community health centre (CHC) | 59 (36%) |
| Community rehabilitation (CR) | 25 (16%) |
| Private practice (PP) | 30 (20%) |
| Work across both primary care and community and acute | 36 (24%) |

## Primary care and community dietitians working in one or more sector

Q6. Does your service comply with performance standards for accreditation?

| Response | Total  *n =* 89 | One sector: CHC  *n =* 36 | One sector: CR  *n =* 14 | One sector: PP  *n =* 15 | More than one sector  *n =* 24 |
| --- | --- | --- | --- | --- | --- |
| Yes | 62 (69%) | 31 | 9 | 3 | 19 |
| No | 9 (10%) | 1 | 0 | 8 | 0 |
| Unsure | 18 (20%) | 4 | 5 | 4 | 5 |

Comments:

* DAA accreditation (2)
* NSQHS (ACSQHC) (8)
* EQuIP (ACHS) (5)
* Home Care Common Standards (HACC) (6)
* Quality Improvement Council Health and Community Service Standards (QIP) (4)
* Aged Care Standards (AACQA) (1)
* RACGP Standards (AGPAL) (1)

Q7. Do these nutrition standards specify key performance indicators for: (*n* = 82)

| Response | Number |
| --- | --- |
| Weighing patients | 19 |
| Nutrition risk screening | 30 |
| Assessment of at risk patients | 28 |
| Unsure | 40 |
| Other (see comments) | 12 |

Comments:

* No nutrition-specific KPIs
* No KPIs at service

Q8. Does your service routinely screen every new patient for nutrition risk?

| Response | Total  *n =* 89 | One sector: CHC  *n =* 38 | One sector: CR  *n =* 15 | One sector: PP  *n =* 14 | More than one sector  *n =* 22 |
| --- | --- | --- | --- | --- | --- |
| Yes | 39 (43%) | 10 | 9 | 10 | 10 |
| No | 48 (54%) | 27 | 6 | 3 | 12 |
| Unsure | 2 (2%) | 1 | 0 | 1 | 0 |

Comments:

* In the process of implementing (3)
* Compliance is poor (7)
* Part of common risk assessment (1)
* Trakcare (1)
* SCTT tool (1)

Q9. Does your service use a malnutrition screening tool?

| Response | Total  *n =* 41 | One sector: CHC  *n =* 11 | One sector: CR  *n =* 7 | One sector: PP  *n =* 9 | More than one sector  *n =* 14 |
| --- | --- | --- | --- | --- | --- |
| Yes | 29 (69%) | 9 | 4 | 5 | 11 |
| No | 13 (31%) | 2 | 3 | 4 | 3 |
| Unsure | 0 (0%) | 0 | 0 | 0 | 0 |

Comments:

* In the process of implementing (2)
* Compliance is poor (1)
* MST acute, SCTT primary care
* Some disciplines are mandated to complete, not all

Q10. Which malnutrition screening tool do you use?

| Response | Total  *n =* 29? | One sector: CHC  *n =* 7 | One sector: CR  *n =* 4 | One sector: PP  *n =* 4 | More than one sector  *n =* 12 |
| --- | --- | --- | --- | --- | --- |
| MST | 22 (81%) | 6 | 4 | 3 | 9 |
| MUST | 2 (7%) | 0 | 0 | 1 | 1 |
| MNA | 3 (7%) | 1 | 0 | 0 | 2 |

Comments:

* SCTT (1)
* Modified MST (1)

Q11. If no specific screening tool is used, which questions/flags are used to indicate nutrition risk? (*n =* 12)

| Response | Number |
| --- | --- |
| Obvious underweight/frailty | 10 |
| Unintentional weight loss | 12 |
| Reduced appetite | 10 |
| Reduce food and fluid intake | 11 |
| Other | 2 |

Comments:

* Taste or bowl changes/gut issues (1)
* Problems with teeth or swallow (1)
* Sporadic or disordered intake/poor mental health (1)

Q12. How often would you? (*n =* 89)

| Response | Never | Rarely | Sometimes | Very often | Always |
| --- | --- | --- | --- | --- | --- |
| Weight patients on initial ax | 0 (0%) | 2 (2%) | 12 (14%) | 47 (53%) | 27 (31%) |
| Weight patients on subsequent review | 0 (0%) | 2 (2%) | 17 (19%) | 53 (60)% | 17 (19%) |
| Measure height on initial ax | 3 (3%) | 22 (25%) | 28 (32%) | 26 (30%) | 9 (10%) |
| Measure height on subsequent review | 29 (33%) | 44 (25%) | 10 (11%) | 4 (5%) | 1 (1%) |
| Calculate BMI on initial ax | 0 (0%) | 9 (10%) | 15 (17%) | 40 (45%) | 25 (29%) |
| Calculate BMI on subsequent review | 4 (5%) | 15 (17%) | 31 (35%) | 28 (32%) | 10 (11%) |

Comments:

* Never or rarely review – height doesn’t change in adults/ (30)
* Only measure for paediatric patients
* Weight – not always relevant (weight management for eating disorders) (11)

Q13. Do you utilise any of the following to diagnose a patient with malnutrition?

| Response | Total  *n =* 89 | One sector: CHC  *n =* 36 | One sector: CR  *n =* 14 | One sector: PP  *n =* 15 | More than one sector  *n*=24 |
| --- | --- | --- | --- | --- | --- |
| SGA | 43 (52%) | 13 (36%) | 12 (86%) | 5 (33%) | 13 (54%) |
| PG-SGA | 15 (17%) | 3 (8%) | 2 (14%) | 3 (20%) | 7 (29%) |
| MNA | 20 (22%) | 11 (30%) | 1 (7%) | 2 (13%) | 6 (25%) |
| ICD-10 | 10 (11%) | 0 (0%) | 4 (29%) | 3 (20%) | 3 (12%) |
| ESPEN diagnosis | 1 (1%) | 0 (0%) | 0 (0%) | 0 (0%) | 1 (4%) |
| Clinical/professional judgement | 61 (66%) | 29 (81%) | 7 (50%) | 8 (13%) | 17 (70%) |

Comments:

* Overarching theme – a variety of tools are used in addition to professional judgment
* Growth charts (paediatrics) (1)
* No benefit within the community due to lack of funding compared to acute (1)

Q14. Do you believe there are patents with malnutrition going unrecognised in your service?

| Response | Total  *n =* 89 | One sector: CHC  *n =* 36 | One sector: CR  *n =* 14 | One sector: PP  *n =* 12 | More than one sector  *n*=27 |
| --- | --- | --- | --- | --- | --- |
| Yes | 56 (63%) | 20 | 9 | 6 | 21 |
| No | 33 (37%) | 16 | 5 | 6 | 6 |

Comments:

* Don’t manage cancer patients (5)
* Pt’s been seen in other services (3)
* Referred to dietitian weight loss or malnutrition (4)

Q15. Have you used any of the following resources? (*n =* 89)

| Response | Number (percentage) |
| --- | --- |
| Malnutrition in Cancer eLearning Program | 19 (21%) |
| Malnutrition governance toolkit | 8 (9%) |
| Peter Mac Oncology nutrition resource guide | 16 (18%) |
| CCV Oncology resource guide for dietitians | 30 (34%) |
| CCV Understanding malnutrition and cancer fact sheet | 28 (31%) |
| Evidence-based guidelines or published literature | 54 (61%) |
| I do not use / am not aware of | 21 (34%) |
| Other | 11 (12%) |

Comments:

* Mainstream resources do not cater for/meet needs for culturally diverse (1)
* Internal education material provided (2)

Q16. Would you like additional support, education or resources? (*n =* 89)

| Response | Number (percentage) |
| --- | --- |
| Yes | 65 (75%) |
| No | 24 (25%) |

Comments:

* Pathways for referrals (1)
* Additional training (webinars, resources for patients and dietitians)
* Support and education resources to focus on primary health care team to address patients going unrecognised (2)
* Resources directed for patients (2)

Q17. What format would you like this support, education or resources? (*n =* 65)

| Response | Number |
| --- | --- |
| Webinar | 45 |
| E-learning | 39 |
| Hardcopy resource | 31 |
| Training course | 25 |
| Email with links to relevant resources | 38 |
| Other | 3 |

Comments:

* All of the above
* Be good to have a format where discussion and questions could take place such as a training course with the back-up of webinars/hard-copy resources
* For non-nutrition health professionals in primary health care (GPs, practice nurses, other allied health) to help with identifying cancer malnutrition early

## Acute dietitians

Q18. How often do you refer patients to dietitians in primary or community care? (*n =* 98)

| Location | Never | Rarely | Sometimes | Very often | Always |
| --- | --- | --- | --- | --- | --- |
| Total *n =* 98 | 2 (2%) | 27 (28%) | 37 (38%) | 28 (29%) | 3 (3%) |
| Metro *n =* 38 | 1 (2%) | 12 (20%) | 26 (43%) | 19 (32%) | 2 (3%) |
| Regional/rural *n =* 60 | 1 (3%) | 15 (23%) | 12 (32%) | 9 (23%) | 1 (3%) |

Q19. In which settings do the dietitians you refer to work? (*n =* 31)

| Response | Number (percentage) |
| --- | --- |
| Community health centre | 25 (81%) |
| Community rehab | 14 (45%) |
| GP practice | 4 (13%) |
| Private practice | 8 (26%) |
| Other (see comments) | 8 (26%) |

Comments:

* Oncology day clinics (2)
* Internal outpatient clinics (2)
* Rural health service (2)
* Subacute (1)

Q20. Reasons why you don’t refer?

| Response | Total  *n =* 65 | Metro  *n =* 36 | Regional  *n =* 29 |
| --- | --- | --- | --- |
| Don’t know where to refer | 12 (18%) | 6 (50%) | 6 (50%) |
| Complex care needs | 25 (38%) | 15 (60%) | 10 (40%) |
| Unable to identify appropriate dietitian to refer to | 0 (0%) | 0 (0%) | 0 (0%) |
| Long wait lists for community dietitian | 14 (22%) | 9 (64%) | 5 (35%) |
| Time/resources required to make referral | 18 (28%) | 9 (50%) | 9 (50%) |
| Patients at my health service are followed up in hospital outpatients | 35 (54%) | 22 (61%) | 13 (36%) |
| Patients continue to receive phone reviews from my health service until stable | 32 (49%) | 19 (59%) | 13 (41%) |
| Financial barriers to private/community sessions | 10 (15%) | 7 (70%) | 3 (30%) |
| Other (see comments) | 17 |  |  |

Comments:

* Pts do not require ongoing follow up / not appropriate (9)
* Pts are followed up in subsequent treatments sessions (4)
* Pt refuses or requests services in all one location on one day (i.e. at acute service) (5)
* Community Dietitian seen as not having specialist knowledge (2)

Q21. How often do you provide a discharge summary to the patients GP?

| Location | Never | Rarely | Sometimes | Very often | Always |
| --- | --- | --- | --- | --- | --- |
| Total *n =* 98 | 31 (32%) | 33 (34%) | 23 (24%) | 8 (8%) | 2 (2%) |
| Metro *n =* 59 | 17 (29%) | 17 (29%) | 17 (29%) | 6 (10%) | 2 (3%) |
| Regional/rural *n =* 39 | 14 (36%) | 16 (41%) | 6 (15%) | 3 (7%) | 0 (0%) |

Comments:

* Pts stable/don’t require follow-up (5)
* Lack of time/ resources (17)
* Do GPs read/want? (3)
* Only sent if ongoing GP mx required (2)
* Not standard practice (11)
* Expect pt to inform GP of acute mx (1)
* Admission summary provided by treating medical team (5)
* Oncologist if the main point of care (2)
* I provide a dc summary to DT (3)
* Only if patient has a feeding tube in situ (2)

Q22. Awareness of cancer rehab programs running in Victoria?

| Response | Total  *n* = 96 | Metro  *n* = 58 | Regional  *n* = 38 |
| --- | --- | --- | --- |
| Yes | 44 (46%) | 25 (56%) | 19 (44%) |
| No | 52 (54%) | 33 (63%) | 19 (37%) |

Q23. Referral cancer rehab programs?

|  |  |  |  |
| --- | --- | --- | --- |
| Response | Total  *n =* 44 | Metro  *n =* 25 | Regional  *n =* 19 |
| Yes | 9 (20%) | 4 (44%) | 5 (55%) |
| No | 35 (80%) | 21 (60%) | 14 (40%) |

If yes, which ones?

* EXMED
* Peter Mac AYA service
* Kew CRC
* Wantirna CRC

Q24. Would you like more information about cancer rehabilitation programs in Victoria? (*n =* 95)

| Response | Number (percentage) |
| --- | --- |
| Yes | 91 (95%) |
| No | 5 (5%) |

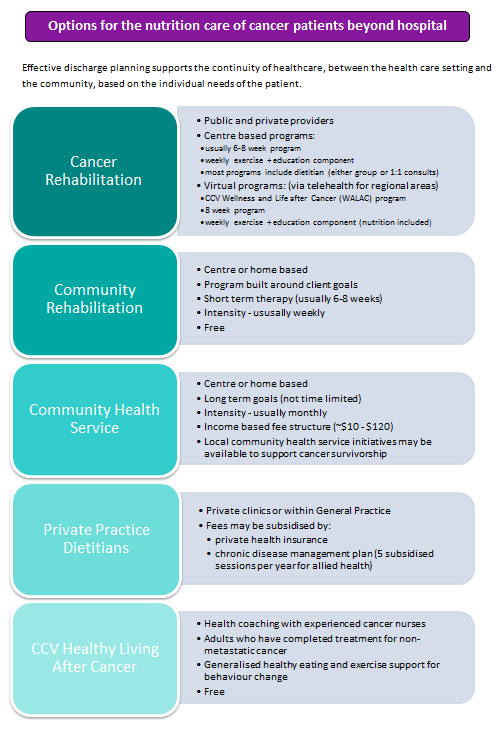
Comments:

* Up-to-date information about CRC: location/cost/duration/eligibility/waitlist
* How to refer

# Appendix 4: Actions to promote the value of statewide nutrition performance measures

| Who | What about | Outcome | Next steps |
| --- | --- | --- | --- |
| Screening and Preventive Health Programs, Department of Health and Human Services | Development of a malnutrition performance measure within the *Victorian cancer plan monitoring and evaluation framework* | Malnutrition performance measure included within the framework  Performance measures reported on in mid-2019 | Continue to work with VAHI and nutrition managers to improve the integrity of nutrition data captured within the VAED |
| Safer Care Victoria | Development of a malnutrition clinical indicator | Encouraged to work on raising the profile of nutrition within SCV  Asked us to coordinate the preparation of a prolonged fasting clinical advisory | Prepare a letter for Euan Wallace highlighting variation in nutrition practice and the prevalence of malnutrition  Draft *Prolonged fasting clinical advisory* submitted to SCV on 16 Mar 2018 |
| Victorian Agency for Health Information | Development of a malnutrition clinical indicator  Under-reporting of malnutrition in the VAED | Encouraged to provide feedback on quality and safety issues to be included as a clinical indicator within VAHI’s reporting program for 2018–19  Consultation guide emailed to nutrition managers across Victoria encouraging a submission from each health service | Continue to work with VAHI to improve the integrity of nutrition data in the VAED  Liaise with the department’s Screening and Cancer Prevention unit to discuss amended wording of the Victorian Cancer Plan performance metric |
| Dietitians Association of Australia | To ascertain whether DAA has been involved in any advocacy work in the area | DAA has been involved in advocating for nutrition standards to be included within the NSQHS Standards and Aged Care Quality Standards | Send DAA final project report highlighting the need for nutrition to be included within quality frameworks covering the primary care and community sector |
| Supportive Care in Cancer Refresh project | Possibility of including a malnutrition screening tool within supportive care screening | The focus of the current project is how to promote supportive care screening | MVCS project team to continue to explore avenues to include a malnutrition screening tool within supportive care screening |
| Director Nutrition and Dietetics, Sydney Local Health District | Development of a NSW nutrition care policy | Broad support for developing a Victorian nutrition care policy | MVCS project team to continue to support the value of a Victorian nutrition care policy |
| Manager, Food Systems and Nutrition Policy, Department of Health and Human Services | Possibility of a statewide nutrition care policy | Supportive of a policy covering both over and under nutrition in hospitals  This is not the remit of her department  Advised to advocate for increased nutrition capacity within the department | MVCS project team to liaise with SCV regarding the possibility of a statewide nutrition care policy |

# Appendix 5: Discharge planning infographic



# Appendix 6: Prolonged fasting clinical advisory (Safer Care Victoria)

## Prolonged fasting – malnutrition risks and best practice

|  |
| --- |
| Key messages   1. Prolonged and unnecessary perioperative fasting increases hospital-acquired malnutrition, affecting healthcare costs, morbidity and patient-centred outcomes. 2. Evidence-based guidelines recommend a two-hour preoperative fast for clear fluids and a six-hour fast for solids in most elective patients. 3. Large variation in fasting practices exist across and within Victorian health services and a collaborative, multidisciplinary and systems approach is required to reduce patient fasting periods. |

### What is prolonged fasting?

Patients requiring multiple and repeated anaesthesia or those repeatedly fasted for surgery (or other procedures including medical imaging) who are exposed to excessive cumulative hours of fasting. Data from Victorian hospitals indicates an average fasting time of 16 hours and a maximum fasting time 68 hours.

Peak bodies1–5 have clear evidence-based recommendations for preoperative fasting to be less than six hours.

### What are the risks of prolonged fasting?

Hospital-acquired malnutrition is a serious avoidable complication. It is well documented that prolonged and unnecessary perioperative fasting contributes to hospital-acquired malnutrition, delaying recovery and negatively impacting on patient experience.6

|  |  |
| --- | --- |
| **In Australian hospitals:7–9**  **41 per cent of patients *at risk* of malnutrition**  **32 per cent of patients *are* malnourished** | ↓ weight and lean body mass  ↓ quality of life  ↑ length of stay  ↑ healthcare costs  ↑ infections  ↑ readmissions  ↑ mortality |

Prolonged fasting has been shown to:

* increase insulin resistance, inflammation, catabolism and loss of lean muscle mass10
* increase the risks of dehydration, hypoglycaemia and electrolyte imbalance4
* increase hunger, thirst, dry mouth, fatigue and headache11
* increase the risk of early postoperative complications including vomiting and pain10,11
* reduce appetite and increase the fear of eating, further exacerbating reduction in food intake.12

### What does the evidence say?

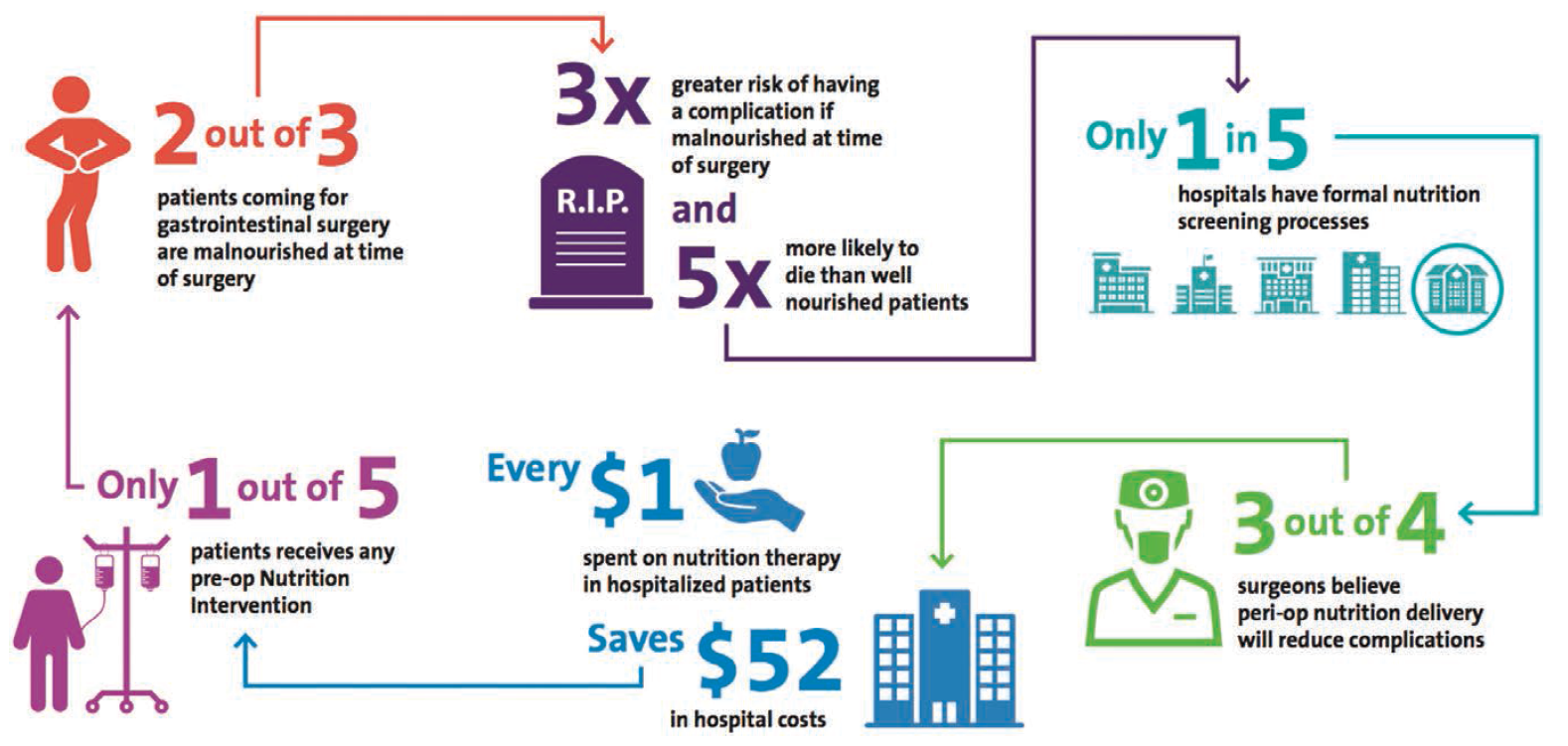
Fasting decreases the risk of regurgitation and aspiration during anaesthesia. However, with the exception of high-risk groups,[[1]](#footnote-1)# there is no evidence that the period of abstinence from food and fluid needs to be more than six hours (refer to Box A1 for recommendations).1 The common practice of ‘fasting from midnight’ is unnecessary for most patients and may increase rates of malnutrition and metabolic disturbances.

Box A1: Australia and New Zealand College of Anaesthetists (ANZCA) recommendations for fasting prior to anaesthesia

|  |
| --- |
| Current recommendations for fasting prior to anaesthesia  **Adults**   * Limited solid food up to six hours prior to anaesthesia   Clear fluids (water, pulp-free fruit juice, clear cordial, black tea and coffee) or specifically modified carbohydrate drinks up to two hours prior to anaesthesia  **Children over six months of age**  Breast milk or formula and limited solid food may be given up to six hours prior to anaesthesia  Clear fluids up to two hours prior to anaesthesia  **Infants under six months of age**  Formula may be given up to four hours or breast milk up to three hours prior to anaesthesia  Clear fluids up to two hours prior to anaesthesia |

*Enhanced recovery after surgery* (ERAS) guidelines provide clear recommendations for best practice, with evidence primarily in the colorectal surgical cohort. These guidelines include limiting the fasting period, the use of specifically modified carbohydrate drinks to attenuate the metabolic response and early reintroduction of normal diet postoperatively.13 Figure A1 summarises the benefits and challenges of implementing these perioperative nutrition interventions.

Figure A1: Facts and data for perioperative nutrition screening and therapy3



### What are Victorian health services doing?

Fasting practices vary significantly between and within health services, with the majority based on historical practice due to the slow implementation of evidence into clinical practice and a ‘fast in case’ culture. However, some health services have adopted a more evidence-based approach.

Fasting prior to anaesthesia

| Negative | Positive |
| --- | --- |
| Current practices do not reflect evidence-based guidelines  Patients often unnecessarily fasted from midnight regardless of surgery schedule | Fasting guidelines for anaesthesia implemented organisation wide in approximately 50 per cent of health services\*  Implementation of ERAS in many surgical units (predominantly colorectal) |

Postoperative fasting

| Negative | Positive |
| --- | --- |
| Despite strong evidence-based guidelines (ERAS) for early reintroduction of oral intake post-surgery, current practices are driven by historical and/or an individual surgeon’s preferences  Postoperative diets restricted to fluids provide inadequate energy and protein and should only be used for a limited period | Escalation pathway for inadequate diet code (nil by mouth, clear fluids, free fluids) ≥ 3 days in one health service |

Repeated and cumulative fasting

| Negative | Positive |
| --- | --- |
| Poor understanding of the implications of current practices and the complexity of the problem  Evident organisational culture of ‘fast in case’ of surgery  Prolonged fasting frequently affects high-risk groups with multiple complications including malnutrition, delirium and infections  Poor communication regarding cancellations between theatres, wards and food services resulting in missed meals  Current food service models are restricted outside of standard meal periods; therefore, when the patient is allowed to eat, there is a limited range of food available  Patients often only provided the opportunity to eat for a short period before fasting begins again  The scale of prolonged fasting is unknown, with limited IT systems to track patients and report data | Implementation of ‘fasting clocks’ to track periods of prolonged fasting successful at several health services; however, they rely on a champion  Escalation pathways for patients fasted longer than six hours at several health services  Theatre cancellations reported as an incident at one health service  Protected slots on endoscopy lists for inpatients and emergency patients implemented to reduce cancelled procedures at one health service |

\* Estimate based on authorship group feedback

### What should we be doing?

* Hospitals should have evidence-based multidisciplinary fasting policies or guidelines and regularly audit compliance
* Develop structured governance systems to track and monitor performance including key performance indicators measuring fasting periods and cumulative fasting (for example, the percentage of patients fasting for > 6 hours, percentage of patients nil oral for > 3 days)
* Escalation pathways for: patients fasted for > 6 hours; inadequate diet code (nil by mouth, clear fluids, free fluids) ≥ 3 days; cumulative fasting
* Flexible food service systems to support ‘on-demand’ meal provision14
* Alternative nutrition support should be considered if reintroduction of nutrition postoperatively is likely to be delayed (> 2–3 days)

|  |
| --- |
| Prepared by the following group of dietitians (representing hospital based Victorian dietitians):  Kathryn Marshall (Melbourne Health), Jane Stewart (Peter MacCallum Cancer Centre), Jenelle Loeliger (Peter MacCallum Cancer Centre), Belinda Steer (Peter MacCallum Cancer Centre), Ibolya Nyulasi (Alfred Health), Belinda Johnston (Austin Health), Kellie Wright (Cabrini Health), Erin Brennan (Eastern Health), Wendy Swan (Goulburn Valley Health), Emma Bidgood (Melbourne Health), Kate Furness (Monash Health), Tara Breheny (Northern Health), Renee Dowie (Peninsula Health), Anna Beaumont (Peter MacCallum Cancer Centre), Clara Newsome (St Vincents Health) and Caroline Calkin (Western Health). |

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# Appendix 7: Response to VAHI’s safety and quality measures and reporting consultation guide

**Question 7: Do you have any comments or views on:**

**Whether aged care measures for public sector residential aged care should be reported by VAHI?**

Our aged care residents are a particularly vulnerable, complex and high-risk group regarding malnutrition, and studies have found approximately 49 per cent are malnourished (1). VAHI does not currently report on ‘unplanned weight loss’, which was a recommended safety and quality measure from the *Targeting zero* report and in addition more generally, malnutrition risk or prevalence (pre-existing or acquired in care) is not reported by VAHI for those in aged care or the general hospital population. Significant clinical variation regarding identification and management of malnutrition exists across different health settings. By instating malnutrition risk or prevalence (pre-existing or acquired in care) as a reportable quality and safety measure, it would help drive both local and system improvements in malnutrition risk screening, appropriate nutrition care planning and interventions, and enable improved outcomes for patients and health facilities.

1. Gaskill D, Black L, Isenring E, Hassall S, Sanders F, Bauer J 2008, ‘Malnutrition prevalence and nutrition issues in residential aged care facilities’, *Australian Journal on Ageing* 27(4):189–194.

**Question 8: Do you have any comments or views on:**

**Whether all hospital-acquired complications should be reported by VAHI?**

Malnutrition was a listed hospital acquired complication within the *Targeting zero* report that is currently not reported by VAHI. Malnutrition in hospitals is a significant quality and risk issue, with about 32 per cent of patients malnourished and at least 41 per cent at risk of malnutrition, with a higher prevalence seen in particularly vulnerable groups on oncology wards (48 per cent malnourished), gastroenterology wards (44 per cent malnourished) and medical wards (35 per cent malnourished) (2). Poor clinical and health service outcomes occur for patients with malnutrition (2). Having malnutrition risk and/or prevalence reported by VAHI would help drive both local and system improvement regarding appropriate risk screening, nutrition care planning and interventions and be well aligned with the addition of malnutrition within the new comprehensive care standard within the NSQHS Standards (second edition).

2. Agarwal E, Ferguson M, Banks M, Bauer J, Capra S, Isenring E 2011, ‘Nutritional status and dietary intake of acute care patients: results from the Nutrition Care Day Survey 2010’, *Clinical Nutrition* 31:41–47.

**Question 10: Do you have any comments or views on:**

**Measures currently captured by other jurisdictions?**

Malnutrition should be recognised as an important selected area of patient safety, alongside like quality and risk issues such as pressure injuries and falls.

The Dutch Ministry of Health has established 17 performance indicators for hospitals. Screening and treatment of malnutrition in hospitals have been included in this set of indicators since 2007 (3).

3. [Dutch Health Care Inspectorate performance measures](https://www.fightmalnutrition.eu/toolkits/performance-indicator-malnutrition-hospital) <https://www.fightmalnutrition.eu/toolkits/performance-indicator-malnutrition-hospital>

**Question 11: Do you have any comments or views on:**

**Which (if any) of these measures should be reported by VAHI?**

Malnutrition is an important area of patient safety (with synergies to pressure injuries and falls) and is under recognised and under-reported and therefore should be reported by VAHI. Currently the only centralised statewide dataset for health services relating to nutrition or malnutrition is in the VAED (malnutrition coding and whether a patient sees a dietitian or not). The coding of malnutrition in the VAED is likely under-reporting the true clinical prevalence of malnutrition. This is because health services are not required to report (and therefore don't have any impetus to) on nutrition risk screening, nutrition referral/intervention and documentation processes or commonly see malnutrition risk screening and/or malnutrition prevalence as a key quality and risk issue that would lead to a VAED malnutrition coding dataset with high integrity. If malnutrition was reported by VAHI it could help to identify and monitor this area where unwanted variation exists and help to drive both local and system improvements and improve the data integrity of the VAED malnutrition coding dataset. In the absence of malnutrition being recognised as a key quality and safely measure, variation in clinical practice (governance, prevalence, practices) and poor outcomes will continue.

**Question 12: Do you have any comments or views on:**

**The measures that should be reported to support the priorities of SCV and the SCV clinical networks?**

As mentioned, malnutrition is an important and under-reported patient safety issue within health services and generally across the entire health sector. The reporting of malnutrition by VAHI would help support the SCV priorities aligned with common patient complaints about nutrition in hospitals – that is, hospital food and prolonged fasting times (SCV Clinical Advisory regarding this in response to patient feedback is underway).

# Abbreviations

ACHS Australian Council on Healthcare Standards

ACSC Australian Cancer Survivorship Centre – A Richard Pratt legacy

ACSQHC Australian Commission for Safety and Quality in Healthcare

APNA Australian Practice Nurse Association

BMI body mass index

CCV Cancer Council Victoria

CoP Community of Practice

COSA Clinical Oncological Society of Australia

DAA Dietitians Association of Australia

GP general practitioner

GPN general practice nurse

HACC Home and Community Care

NSQHS National Safety and Quality Heath Service Standards

MVCS Malnutrition in Victorian Cancer Services

MNA Mini Nutrition Assessment

MST Malnutrition Screening Tool

MUST Malnutrition Universal Screening Tool

MVCS Malnutrition in Victorian Cancer Services

PHN Primary Health Network

QIP Quality Improvement Program

RACGP Royal Australian College of General Practitioners

SCREEN II Seniors in the Community: Risk Evaluation for Eating and Nutrition II

SCTT Service Coordination Tool Template

SCV Safer Care Victoria

SNAQ Short Nutritional Assessment Questionnaire

VAED Victorian Admitted Episode Dataset

VAHI Victorian Agency for Health Information

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1. # Patients having emergency procedures, those with known/suspected delayed gastric emptying or oesophageal motility disorders, patients who have had bariatric surgery, and obstetric patients in labour1 [↑](#footnote-ref-1)