

# Nutrition & Dietetics

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# Nutrition & Dietetics

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# Nutrition & Dietetics

## Journal of Dietitians Australia

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**Address for Editorial Correspondence:**

Editor, *Nutrition & Dietetics*  
1/8 Phipps Close  
Deakin ACT 2600  
Australia  
Email: [ndi.eo@wiley.com](mailto:ndi.eo@wiley.com)

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I would like to start off by acknowledging the Aboriginal people as the traditional custodians of the land and waters of Australia and pay my respects to the Elders, past, present and emerging.

It gives me great pleasure to present to you an outstanding supplement of *Nutrition & Dietetics* honouring the high-quality abstracts accepted to the Dietitians Australia 2021 Conference. After a year of unprecedented challenges, the content of this supplement promises to celebrate how dietitians have transformed, reinvented and diversified themselves into strength upon strength.

Whilst intentions were to host a hybrid conference allowing for face-to-face and virtual attendance this year, variant strains of the coronavirus had other plans as Melbourne stepped into its fourth wave on 27 May 2021.<sup>1</sup> With confidence and certainty, the conference committee switched gears knowing that the stellar program is still possible regardless of mode of delivery.

As a virtual tree of life for our dietetic community, this year's conference was rooted in three themes: *transformation*, *reinvention* and *diversification*.

The call to *transform* echoed in attendee homes as our inspirational speakers detailed, through dietitians' eyes, how they transformed in the face of disaster. From the COVID-19 pandemic plaguing intensive care units in the United Kingdom, to the floods of Western Australia limiting food supply, to the Christchurch Hospital's response to the tragic Mosque shooting that claimed the lives of 51 worshippers.

As Melbourne's trees *reinvent* themselves once they shed bare after autumn, they appear entirely new. In keeping with this theme, the reinvention sessions seeded practical tips for redesigning dietetic practice, inspired us to think big as we learn how an Oncologist reinvented health-care superannuation investments, and contemplated new ways to advocate for nutrition in the face of new public health challenges.

In dendrology, *diversification* is when all the leaves, roots and branches of different trees intertwine to live in a symbiotic relationship. This year, we wanted to celebrate diversity in our dietetic community. With thought-provoking speakers, the diversify sessions guided attendees into reflective appraisal on how each approach diversifies in their colleagues, clients, leadership and everyday life.

It did not end there. A plethora of luscious green leaves consisting of 127 oral research presentations, 32 rapid fire presentations and 52 e-posters made it clear that our community is here to stay and is as strong as ever. With ongoing virtual access to all sessions, our attendees now have a flowing river of inspiration, raking answers to the questions: what is possible when you transform; what is possible when you reinvent yourself; and what is possible when you embrace living and working in a diverse community?

I would like to sincerely thank the 2021 Scientific and Social Program Committee for their imaginative contributions to the program development. I would also like to thank Dietitians Australia for providing the dietetic community with an annual platform to think big and dream even bigger.

Lina Breik BND(Hons), APD, MPH,  
Scientific and Social Program Committee Chair

*Dietetics Department, Eastern Health, Melbourne,  
Victoria, Australia*

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**ID: 153 | Training the future workforce through a pandemic: The Monash University Experience**

Amanda Anderson<sup>1</sup>, Lisa Barker<sup>1</sup>, Tammie Choi<sup>1</sup>, Jorja Collins<sup>2</sup>, Claire Palermo<sup>1</sup>, Sue Kleve<sup>1</sup>, **Evelyn Volders<sup>1</sup>**  
<sup>1</sup>Monash University, <sup>2</sup>Eastern Health

**Background:** The COVID-19 pandemic required novel and diverse approaches to support students' course progression, competency development and learning experience. Challenges were enhanced for our larger student cohort, and a significant lockdown period.

**Aim:** To describe: (1) the approaches taken to support Monash University Master of Dietetics students remotely during COVID-19 and; (2) the outcomes of and reflections on these experiences from the perspectives of academics, students and placement providers.

**Methods:** Modifications and innovations in teaching and learning included: synchronous and asynchronous online lectures and workshops, home-based kitchen practicals, hybrid onsite-offsite foodservice and public health placements and telehealth clinical placements. In addition, overseas placements, mentoring and an internship program were created to engage international students in Australia and overseas. Data were gathered through surveys and reflections.

**Results:** Overall, these approaches enabled the majority of students to progress as planned. Satisfaction with the hybrid placement model, and employability skill development in the internship were reported. Enabling factors were: agility, flexibility and open mindedness among academics, placement providers, students and Dietitians Australia. Challenges for academics included: navigating organisation-specific and changing restrictions, meeting legal and accreditation requirements, instigating individualised 'catch-up' plans for students overseas, and the associated time burden and mental load.

**Conclusion:** Upheaval caused by COVID-19 necessitated significant changes, and a variety of approaches and engagement from all parties impacted were critical for successful teaching and learning.

**Contact Author:** Evelyn Volders - evelyn.volders@monash.edu

**ID: 11 | Edu-tainment: using evidence-based practice to develop a nutrition podcast**

**Lauren Atkins<sup>1</sup>**, Elise Den<sup>1</sup>  
<sup>1</sup>OnCore Nutrition

**Background:** Podcast awareness is high in Australia with 89% of Australians familiar with podcasting and 30% listening regularly. In a society where nutrition and health misinformation is frequent and widespread, podcasting presents an effective platform to spread evidence-based credible information to a wide audience.

**Aims:** To develop and evaluate an evidence-based nutrition podcast, 'OnCore Nutrition Two Peas in a Podcast' (ONTPIAP).

**Method:** Benchmarking and gap analysis was undertaken to determine the need and target audience for the podcast. Expert stakeholders and a consumer pilot group were engaged to support development and review of the program. A qualitative consumer review and evaluation of three episodes of the program was undertaken to refine and optimise the format and content to the target audience.

**Results:** The process of developing the podcast framework, format, content, pre- and post-production, evaluation, marketing and communication plans will be presented to assist application and uptake. Results from the pilot evaluation as well as up-to-date data and analytics will be discussed. The time and resources required for successful development and release will be explored.

**Conclusion:** The continuous improvement cycle can be implemented to successfully develop and evaluate a nutrition and health podcast to support consumer uptake and therefore reach of evidence-based health messages. Future direction involves refinement of the ONTPIAP framework, ongoing content development and adjustment to consumer interest. Given the power of word-of-mouth recommendations in the podcast space, efforts to enhance the community nature of podcasts may be meaningful.

**Contact Author:** Lauren Atkins - lauren.atkins@oncorenutrition.com

**ID: 104 | Exploring staff capability to embed Indigenous perspectives and pedagogies into the health curricula**

**Rachel Bacon<sup>1</sup>**, Rhonda Wilson<sup>1</sup>, Holly Northam<sup>1</sup>, Jane Kellett<sup>1</sup>, Catherine Knight-Agarwal<sup>1</sup>, Michelle Minehan<sup>1</sup>, Rebecca Mete<sup>1</sup>, Dennis Foley<sup>1</sup>  
<sup>1</sup>University of Canberra

**Background:** Professional competency standards require health graduates to demonstrate cultural competence, however, evidence suggest that academics may feel underprepared for this task.

**Aim:** To explore staff capability and self-efficacy to embed Indigenous perspectives and pedagogies into the health curricula.

**Methods:** Under the guidance of an Aboriginal and Torres Strait Islander Expert Advisory Group, an Indigenous methodology was used led by Kamilaroi, Ngunnawal and Wiradjuri leaders (n = 3). Six research questions [covering academic knowledge, teaching practices and graduate outcomes in cultural responsiveness] guided 5 different yarning circles [dietetics students (n = 6), allied health academics (n = 5; n = 6\*) and nursing and midwifery academics (n = 6; n = 9)]. These conversations were audio recorded, transcribed verbatim and cross-checked for consistency. Data were analysed using an exploratory, inductive and process orientated approach, incorporating researcher reflexivity. Four researchers independently reviewed the transcripts and documented preliminary themes. Three researchers together then reviewed one transcript to consider the relational and collectivist implications of the employed methodology and to reach a consensus decision.

**Results:** The yarning circles enabled participants to share knowledge and practices and to co-create the following understandings / themes: (1) There is a notable knowledge gap and an opportunity for shared learning; (2) This research was challenging - all learners and educators need to feel safe; (3) As a collective 'we' can deliver this curriculum; and (4) A system of supported responsibility is required.

**Conclusion:** Findings from this research support a progressive structure for personal development that aligns Indigenous supervision and educator capability.

**Contact Author:** Rachel Bacon - Rachel.Bacon@canberra.edu.au

### ID: 217 | Inclusion of environmental sustainability in food based dietary guidelines: A comprehensive review

**Danielle Baird**<sup>1</sup>, Mario Herrero Acosta<sup>1</sup>, Malcolm Riley<sup>1</sup>, Gilly Hendrie<sup>1</sup>, Amanda Lee<sup>2</sup>, Mark Lawrence<sup>3</sup>, Jessica Bogard<sup>1</sup>, Genevieve James-Martin<sup>1</sup>, Kim Anastasiou<sup>1</sup>, Bonnie Wiggins<sup>1</sup>, Gemma Williams<sup>1</sup>, Megan Rebuli<sup>1</sup>, Paige Brooker<sup>1</sup>

<sup>1</sup>CSIRO, <sup>2</sup>The University of Queensland, <sup>3</sup>Deakin University

**Background:** Food-based dietary guidelines (FBDGs) provide population guidance on healthy eating and help to frame nutrition programs, policies and investments.

There is increasing interest in the environmental impacts of dietary patterns, and recognition of the synergies between diets for health and environmental sustainability. However, the extent to which environmental sustainability is included in FBDGs is largely unknown.

**Aim:** To review the inclusion of environmental sustainability messaging within FBDGs, and to describe the depth and breadth of inclusion.

**Methods:** The FAO website was used to identify more than 100 countries with FBDGs and a systematic search conducted to collate all consumer and background documents. Documents were manually searched for mention of sustainability using predefined terms. Content was extracted by two independent reviewers and graded using criteria based on the FAO guiding principles for healthy sustainable diets.

**Results:** A total of 45 documents, from 35 countries, referred to sustainability (16 consumer, 29 background documents). The degree to which sustainability was included varied from one sentence to approx. 13% of content. Background documents addressed sustainability in greater depth than consumer documents. Less than half the documents explained why sustainability is important or how dietary changes can be made, and rarely quantified what a sustainable diet might be.

**Conclusion:** Despite being a critical global issue, the inclusion of environmental sustainability in FBDGs around the world is not common currently. With the imminent review of ADGs, it is useful to understand how other countries have addressed sustainability within their public health nutrition documentation.

**Contact Author:** Danielle Baird - danielle.baird@csiro.au

### ID: 143 | "Nothing about us without us": New parents shaping an infant feeding intervention and research

**Richard Ball**<sup>1</sup>  
<sup>1</sup>NSW Health

**Background:** Early life dietary intake and eating behaviours contribute to long term weight and chronic disease trajectories. The internet, parenting peers and family provide new parents with the majority of their infant nutrition and feeding information, with limited health service offerings available to support new parents in feeding. Peer education has the potential to influence feeding practices of new parents by capitalising on social connections.

**Aim:** To examine and describe the evolution, refinement and evaluation of a Peer Education infant/child nutrition

and feeding participatory action study implementation model.

**Methods:** New parents (n = 260) of 0 to 2-year-old infants consented, received infant/child feeding training to on-share within parents' networks and family, supported with evidence-based online resources. Participants were engaged as co-researchers over 2 years (2018-2020) to contribute to program redesign and co-delivery. Qualitative data were collected from focus groups, individual interviews, participant correspondence and online contributions, then coded and thematically analysed.

**Results:** The four dominant themes were: Balancing research and implementation (obtaining data for funding vs participant burden); Come to us...do not make us come to you (use our preferred communication methods); Intervention dose (how much information exposure parents need); and Parent vs expert support (getting the mix right).

**Conclusion:** This study provides extensive insights into success factors for interventions targeting new parents feeding practices, and population health research practices. Our findings will inform the ongoing implementation and quantitative analysis of this peer education program and is of interest to health professionals working in the infant/child feeding/nutrition space and those undertaking community-based research.

**Contact Author:** Richard Ball - richard.ball@uon.edu.au

### ID: 98 | Cancer survivors' perspectives of dietary information provision after cancer treatment in Australia: A scoping review

Katherine Barlow<sup>1</sup>, Jolieke van der Pols<sup>1</sup>, Stuart Ekberg<sup>1</sup>, Lizzy Johnston<sup>1</sup>

<sup>1</sup>Queensland University of Technology

**Background:** As survivorship increases, supporting the health and wellbeing of people affected by cancer is a priority.

**Aim:** To map current knowledge regarding cancer survivors' perspectives of dietary information provision post-treatment in Australia.

**Methods:** A scoping review of research conducted in Australia within the past decade reported using PRISMA-ScR guidelines. Seven databases were searched in June 2020. Records were independently screened by two researchers. Data charting included participant characteristics, study methodology, and cancer survivors' reports of dietary information provision post-treatment.

**Results:** Of 531 records identified, 12 met eligibility criteria. Most studies included breast (58%) and colorectal

(42%) cancer survivors  $\leq 5$  years post-diagnosis (84%). Three studies were conducted among specific ethnic groups in Australia (Indigenous Australians, Chinese-Australians, Greek-Australians). Participants in the included studies commonly reported limited or ineffective dietary information from healthcare providers post-treatment. Cancer survivors identified a need for individualised dietary strategies to manage ongoing symptoms, professional support for weight management, and practical skills for healthy eating. Among ethnic groups, there was a need for dietary information that considers traditional foods and cultural beliefs, and is available in their native language. Cancer survivors valued ongoing dietary follow-up and support post-treatment, suggesting a variety of face-to-face and online delivery modes. Those residing in rural and remote areas reported barriers to accessing dietary information post-treatment including time, cost, and availability of local services.

**Conclusion:** There is scope to improve dietary information provision after cancer treatment in Australia. Dietary guidance post-treatment should consider individual needs, cultural background, and opportunity for ongoing follow-up and support.

**Contact Author:** Lizzy Johnston - e23.johnston@qut.edu.au

### ID: 221 | A web-based intervention to improve the implementation of nutrition practices in childcare

Courtney Barnes<sup>1</sup>

<sup>1</sup>University of Newcastle

**Background:** Web-based modalities provide a potentially effective and less costly approach to implementing nutrition interventions within the childcare setting at scale.

**Aim:** To collect data to inform processes to undertake a fully-powered implementation trial; examine the uptake of the implementation strategies; examine the acceptability of intervention and implementation strategies; and understand the cost to deliver the implementation support strategies.

**Methods:** A pilot implementation trial employing a cluster randomised controlled trial design conducted in childcare centres within NSW. Intervention centres received implementation strategies embedded within a web-based program and provided by health promotion officers. Feasibility of the intervention was assessed through study consent rates and completion of data collection for centres. Uptake of the implementation strategies were captured via analytics and internal records. Cost was assessed via internal records. Acceptability of



the intervention was assessed through online or telephone surveys with centre staff.

**Results:** A 47% consent rate was achieved. Twenty-two centres (100%) consented to participate in data collection components. All intervention centres (n = 11) received audit with feedback and developed a formal implementation blueprint via the web-based program. All intervention centres received the educational outreach visit and 91% received a support call (n = 10). One hundred per cent of centre managers (n = 11) reported the web-based program as being an acceptable method for assessing implementation of nutrition practices. All implementation strategies were deemed highly acceptable by 100% of centre managers. The total cost to deliver the implementation strategies was \$1351.

**Conclusion:** The web-based intervention is a promising alternative to providing scalable support to childcare centres.

**Contact Author:** Courtney Barnes - courtney.barnes@health.nsw.gov.au

### ID: 196 | Are health services ready for technology-supported models of nutrition care? Perspectives of health service providers

**Amandine Barnett**<sup>1</sup>, Jaimon Kelly<sup>1</sup>, Charlene Wright<sup>1,2,3</sup>, Katrina Campbell<sup>4</sup>

<sup>1</sup>Griffith University, <sup>2</sup>Menzies Health Institute Queensland and School of Medicine, <sup>3</sup>Centre of Applied Health Economics, <sup>4</sup>Metro North Hospital and Health Service

**Background:** Digital technologies are increasingly used to provide unique, effective and high-value nutrition care. To evaluate their impact at scale and embed sustainable practice change, investment in understanding the context to use digital technologies in practice and co-designing with key stakeholders is needed.

**Aims:** To determine the perspectives to the adoption, scale-up and sustainability of using technology-supported models of nutrition care, in hospital and outpatient settings.

**Methods:** Thirty-one clinical dietitians, allied health practitioners and health service directors were recruited to participate in semi-structured interviews. The established Non-adoption, Abandonment, Scale-up, Spread and Sustainability framework informed the questioning and analytical approach.

**Results:** Findings indicated (i) with 'Technology' use, confidence varies yet it is inevitably here to stay; (ii) the 'Value Proposition' of many patient groups can benefit from technology-supported models, supporting seamless delivery of care and operations within health services;

(iii) 'Adopters and Organisations' relate to the challenge of transitioning and overcoming current system barriers, however, dietitians are perceived as the drivers of this change; (iv) 'Embedding and Adaption' over time will be ensuring the quality of the service is maintained and involves further research to support implementation.

**Conclusion:** Health professionals recognise that adopting, scaling and sustaining technology-supported models will benefit both patients, clinicians and health services in general. Considering a rapidly changing health delivery environment, robust clinical trials and health service evaluations of technology-supported models of care across a range of practice settings are now needed.

**Contact Author:** Amandine Barnett - a.barnett@griffith.edu.au

### ID: 76 | Can hospitalised eating disorder patients be managed on oral intake without the event of hypoglycaemia?

**Cassandra Bendall**<sup>1</sup>, Cara Brockbank<sup>1</sup>, Shyharini Abeysinghe<sup>1</sup>

<sup>1</sup>Eastern Health

**Background:** Hypoglycaemia is a potential consequence when refeeding eating disorder patients. In the absence of standardised blood glucose (BGL) management guidelines, common practice is to commence patients on continuous nasogastric feeds to minimise the risk of hypoglycaemia. However, limited research exists to support this practice. The initiation of oral intake, via prescribed meal plans with modified carbohydrate content and close BGL monitoring, is the preferred practice within our service.

**Aim:** To determine the prevalence of hypoglycaemia with the initiation of oral intake for adolescent eating disorder patients during an acute admission.

**Methods:** A 12-month retrospective medical record audit of adolescents admitted with an eating disorder was conducted. Demographic and clinical outcome data, inclusive of diagnosis, weight, BMI, refeeding risk, lowest BGL, details of hypoglycaemia, and prescribed meal plans was collected.

**Results:** One-hundred and twenty-four patients were admitted for medical stabilisation (mean age 16.0 years; mean BMI 17.8 kg/m<sup>2</sup>; 68% with Anorexia Nervosa). Forty-five (36%) adolescents experienced a hypoglycaemic episode during their admission, of which 15 were in the emergency department pre-admission and pre-commencement of any dietary intervention. Of the remaining 20 patients (16%) that experienced a

hypoglycaemic episode post commencement of oral intake, only 1 (7%) required nasogastric feeds to treat the hypoglycaemia. Around one third of this study's population experienced a hypoglycaemic episode during their acute admission and only one patient required nasogastric feeding to treat the hypoglycaemia.

**Conclusion:** The findings of this study suggest that implementation of oral intake is a safe and effective method of refeeding in this cohort.

**Contact Author:** Cassandra Bendall - cassandra.bendall@easternhealth.org.au

### ID: 247 | What impact does obesity have on clinical outcomes for young people with Duchenne muscular dystrophy?

Natassja Billich<sup>1,2</sup>, Justine Adams<sup>3</sup>, Kate Carroll<sup>2,4</sup>, Helen Truby<sup>1,4</sup>, Maureen Evans<sup>2</sup>, Monique Ryan<sup>2,3,5</sup>, Zoe Davidson<sup>1,3,2</sup>

<sup>1</sup>Monash University, <sup>2</sup>The Royal Children's Hospital, <sup>3</sup>Murdoch Children's Research Institute, <sup>4</sup>University of Queensland, <sup>5</sup>University of Melbourne

**Background:** Young people with Duchenne muscular dystrophy (DMD) are more susceptible to obesity, yet little is known about the impact of obesity on clinical outcomes.

**Aim:** To investigate the impact of obesity on clinical outcomes in boys with DMD.

**Methods:** Medical records of males with DMD attending the Royal Children's Hospital were retrospectively reviewed. Demographic, anthropometric and body composition outcomes were collected and analysed descriptively. Clinical milestones related to physical function, respiratory function, sleep and bone health were collected. Time-to-event analysis using a Cox proportional hazards model determined the effect of overweight or obesity compared to no overweight/obesity at age 5 to 9 years on clinical milestones.

**Results:** From 158 patients, 2456 body mass index (BMI), 227 lean and 232 fat mass observations were analysed. 89.9% were treated with steroids. Between 3 to 19 years median BMI z-score was >1. Obesity prevalence increased from 5 (16.7%) to 11 years (50.6%) and declined to 25.0% at 19 years. Fat mass increased and lean mass decreased with increasing age. Obesity at ages 5 to 6 and 9 years and at 6 to 9 years was associated with earlier first bone fracture and obstructive sleep apnoea (OSA) diagnosis, respectively. Time to a slower (7-10 seconds) 10 m walk/run occurred later in those with obesity at 8 years.

BMI status did not significantly impact other milestones related to physical function.

**Conclusion:** Managing obesity in DMD in boys treated with steroids may be important to minimise the risk of early fracture and OSA. The impact of obesity on physical function remains unclear.

**Contact Author:** Natassja Billich - natassja.billich@monash.edu

### ID: 114 | A systematic scoping review of the trends, challenges, opportunities and future needs of the dietetic workforce

Merran Blair<sup>1</sup>, Claire Palermo<sup>1</sup>, Simone Gibson<sup>1</sup>, Lana Mitchell<sup>2</sup>

<sup>1</sup>Monash University, <sup>2</sup>Griffith University

**Background:** Changes in healthcare delivery and consumer needs have resulted in rapidly evolving employment opportunities for dietitians. However, it is unclear if the dietetics workforce is being optimally utilised. Issues related to food, nutrition and health continue to be prominent yet it is unclear if the current dietetics workforce are meeting community needs.

**Aim:** To investigate trends, challenges, opportunities and future needs of the dietetic workforce.

**Methods:** A systematic scoping review of eight academic databases from 2010 onwards, five grey literature databases and the Google search engine was conducted according to PRISMA-ScR guidelines. Data charting utilised a directed content analysis in the formative categories of trends, challenges, opportunities and future needs. A constant comparison technique was then utilised to identify commonly recurring themes.

**Results:** Of 2050 articles that were screened, 184 were eligible for inclusion in this scoping review. Thirteen themes were identified; (1) emerging or expanding areas of practice (2) skill development, (3) economic considerations, (4) nutrition informatics, (5) diversity within the workforce, (6) specific areas of practice, (7) further education, (8) intrapersonal factors, (9) perceptions of the profession, (10) protecting the scope of practice, (11) support systems, (12) employment outcomes and (13) registration or credentialing.

**Conclusion:** The dietetics profession is aware of the need to enhance the skills of our current and future workforce in order to expand into diverse areas of employment. Comprehensive workforce data are necessary to track changes over time and facilitate future workforce planning.

**Contact Author:** Merran Blair - merran.blair@monash.edu

### ID: 158 | Predictors of discretionary energy intake in Indigenous Australian adolescents

Michelle Blumfield<sup>1</sup>, Andrew McConnell<sup>1</sup>, Peter Petocz<sup>2</sup>, Anika Rouf<sup>3</sup>, Emily Duve<sup>1</sup>, Scott Teasdale<sup>1</sup>, Skye Marshall<sup>1,4</sup>, Flavia Fayet-Moore<sup>1</sup>

<sup>1</sup>Nutrition Research Australia, <sup>2</sup>Macquarie University,

<sup>3</sup>The University of Sydney, <sup>4</sup>Bond University Nutrition & Dietetics Research Group

**Background:** European colonisation has disrupted Australian Indigenous traditional dietary patterns and hunter-gatherer traditions. Consequently, Indigenous diets are typically characterised by energy-dense, processed foods.

**Aims:** To investigate the predictors of discretionary energy intake (DEI) among Indigenous Australian adolescents.

**Methods:** Data from the 2012 to 13 National Aboriginal and Torres Strait Islander Nutrition and Physical Activity Survey (n = 264, 15-17 years) were analysed. Dietary data were collected using an Automated Multiple-Pass Method. Demographic, anthropometric, and body image characteristics were considered as potential predictors of DEI.

**Results:** In generalised linear models, males from remote locations reported a higher DEI compared to females from remote locations (5.1 vs 3.0 MJ;  $P = .007$ ) and males from non-remote locations (5.1 vs 3.6 MJ,  $P = .007$ ). Adolescents who perceived themselves as overweight had a higher DEI compared to those who perceived themselves as underweight (5.0 vs 3.0 MJ,  $P = .022$ ), or an acceptable weight (5.0 vs 3.6 MJ,  $P = .022$ ). Weight dissatisfaction influenced higher DEIs in males (5.0 vs 3.2 MJ,  $P < .001$ ) and lower DEIs in females (2.0 vs 4.6 MJ,  $P < .001$ ), compared to those that were satisfied. For each increase in self-assessed health category (from poor to excellent), DEI in males was lower by 1 MJ compared to females ( $P = .005$ ). There were no differences in DEI by dieting status or risk of metabolic complications.

**Conclusion:** In Indigenous adolescents, there was a relationship between DEI and self-assessed health, body weight satisfaction and geographical remoteness, moderated by sex. There is a need for well-designed intervention studies to test the effect of community-based nutrition and lifestyle interventions on Indigenous adolescent health and wellbeing.

**Contact Author:** Michelle Blumfield - michelle@nraus.com

### ID: 103 | Diet upgrades post abdominal aortic aneurysm: identifying trends and transforming clinical practice

Jilyn Blundell<sup>1</sup>, Teresa Brown

<sup>1</sup>The Royal Brisbane and Women's Hospital

**Background:** Limited evidence exists regarding post-operative diet upgrade post-abdominal aortic aneurysm (AAA) repair and periods of nil by mouth and clear fluids are commonly seen. Prolonged nutrient inadequacy leads to weight loss in an already at-risk population.

**Aim:** To evaluate associations between diet upgrade and gastrointestinal function and determine alignment with current surgical practices which requests bowels open prior to diet upgrade.

**Methods:** A retrospective chart review of patients admitted for AAA repair between October 2018 and March 2019 was performed (n = 19). The review included open repair and excluded endovascular repair. Data were collected on the following outcomes: number of days spent nil by mouth (NBM), clear fluids (CF) and free fluids (FF); number of days between bowels opening and full diet commencement; and % weight loss from admission to discharge.

**Results:** Mean duration (days) of prescribed diets were: 1.37 (NBM), 1.79 (CF) and 1.11 (FF). The median time from bowels opening to full diet upgrade was 0 days (IQR -1 to 1) - indicating events mostly occurred on the same day but with some variability in practice, including four patients who commenced a full diet before bowels opened. Ten patients had mean weight loss of 3.36%, four patients remained weight stable and five patients were unknown missing or inaccurate weight data.

**Conclusion:** There is lack of consistency in diet upgrades with results contradicting the rationale for current clinical practice. These delays in diet upgrades increases the risk of nutritional decline, and thus implementation of a modified ERAS protocol should be considered.

**Contact Author:** Jilyn Blundell - jblundell095@gmail.com

### ID: 205 | Understanding the importance of wild, cultivated and community food environments in the Pacific region

Jessica Bogard<sup>1</sup>, Neil Andrew<sup>2</sup>, Michael Sharp<sup>3</sup>, Penny Farrell<sup>4</sup>, Jillian Tutuo-Wate<sup>5</sup>

<sup>1</sup>CSIRO, <sup>2</sup>University of Wollongong, <sup>3</sup>Pacific Community, <sup>4</sup>University of Sydney, <sup>5</sup>WorldFish

**Background:** Extensive literature examines the role of the retail food environment (FE) as a driver of obesity, yet retail does not capture the variety of food sources in many low-and-middle-income countries, particularly in the Pacific region. This limits our understanding of how the FE contributes to the double burden of malnutrition.

**Aim:** To characterise the FE in the Pacific, and the relative importance of these FEs in people's diets in the Solomon Islands.

**Method:** A conceptual typology of FEs is presented based on a literature review and stakeholder consultation. This typology is then tested through secondary analysis of food acquisition data from the Solomon Islands 2012/13 Household Income and Expenditure Survey.

**Results:** We propose six primary FEs relevant in the Pacific; wild, cultivated, kin and community, informal retail, formal retail and food aid and services. The cultivated FE is by far the most important single FE accounting for 60% of the quantity of food acquired, followed by wild (15%), kin and community (9%), and formal and informal retail FEs (8% each). Important differences exist between urban and rural households, wealth groups and provinces, as well as proportion of food groups provided by different FEs.

**Conclusion:** The wild and, kin and community FEs have been previously overlooked as a food source. This evidence highlights the critical need for tools and methods to characterise these unique FEs (in addition to cultivated and retail) in the Pacific region and beyond, and to understand their relationship to nutrition and health outcomes.

**Contact Author:** Jessica Bogard - jessica.bogard@csiro.au

#### **ID: 164 | Incidence and criteria used in the diagnosis of hospital-acquired malnutrition in adults: a systematic review**

Liliana Botero<sup>1</sup>, Adrienne Young<sup>1-3</sup>, Merrilyn Banks<sup>2</sup>, Judy Bauer<sup>1,4</sup>

<sup>1</sup>University of Queensland, <sup>2</sup>Royal Brisbane & Women's Hospital, <sup>3</sup>Metro North Hospital & Health Service, <sup>4</sup>Dietitians Australia

**Background:** Despite advances in identifying malnutrition at hospital admission, decline in nutritional status of well-nourished patients can be overlooked. In 2018, the Australian Commission on Safety and Quality Health Care included malnutrition as a serious preventable hospital-acquired complication.

**Aim:** To investigate the incidence of hospital-acquired malnutrition (HAM), the criteria used to diagnose it, and its health-related outcomes.

**Methods:** We performed a search of the following databases up to September 26, 2020: PubMed, CINAHL, Embase and Cochrane Library. Studies were included if changes in nutritional status was assessed with a validated nutrition assessment tool in acute and subacute adult ( $\geq 18$  years) hospitalised patients.

**Results (preliminary):** Ten observational cohort studies (eight prospective and two retrospective) were included, involving 35 256 participants from acute (seven studies) and subacute units (three studies). Retrospective studies reported a lower incidence of HAM (0.15%-1%) than prospective studies (acute: 9%-38%; subacute: 0%-7.4%). Diagnostic criteria varied, with use of different nutrition assessment tools; timeframes for assessment (retrospective studies:  $>14$  days; prospective studies:  $\geq 3$  days); and inclusion of patients with new malnutrition vs increase in malnutrition severity. Three studies reported health outcomes of nutritional decline, including longer length of stay, higher hospital costs and readmission rate, increased complications and mortality within 6 months.

**Conclusion:** Retrospective studies indicate that HAM is undetected and/or undocumented, given higher incidence seen in prospective studies. This review highlights the need for consensus around diagnostic criteria and further studies to understand the impact of HAM and how it can be prevented.

**Contact Author:** Liliana Botero - l.boterozapata@uqconnect.edu.au

#### **ID: 210 | Development, implementation and evaluation of an entrustable professional activity - based student placement assessment tool in clinical dietetics**

Andrea Bramley<sup>1,2</sup>, Adrienne Forsyth<sup>3</sup>, Lisa McKenna<sup>3</sup>  
<sup>1</sup>La Trobe University, <sup>2</sup>Monash Health, <sup>3</sup>La Trobe University

**Background:** There is no national tool for student placement assessment in dietetics. A new concept in work-based assessment, Entrustable Professional Activities (EPAs) describe key activities a work-ready practitioner can perform independently.

**Aims:** To design, implement and evaluate a dietetic student placement assessment tool using EPAs in clinical dietetics.

**Methods:** An action research model incorporating student, supervisor and educator co-design was used to revise an electronic placement assessment tool. A mixed-methods approach using online surveys and focus groups (four cohorts final year students  $n = 38$  and supervisors  $n = 20$ ) provided feedback on assessment strategies

including EPAs and existing tool utility. The revised placement assessment tool with embedded EPAs was piloted and implemented in three consecutive dietetic student cohorts (students  $n = 45$ , supervisors  $n = 30$ ) and evaluated using online surveys to determine feasibility, face-validity and acceptability.

**Results:** Seven students (18%) and eight supervisors (40%) returned pre-implementation surveys. Three supervisor focus groups ( $n = 15$  total) and one student focus group ( $n = 4$ ) found all users preferred EPAs for placement assessment. Satisfaction with existing competency-based assessment tool was low; mean 3.6 (students) 1.8 (supervisors) with 1 = highly dissatisfied, 5 = highly satisfied. Post-pilot evaluation survey results confirmed EPAs as a feasibility, acceptable and valid placement assessment strategy. Students and supervisor satisfaction increased to 4.3 ( $n = 50$ ) and 4.02 ( $n = 65$ ) respectively.

**Conclusion:** EPAs are an innovation that translate competencies into observable work-based activities and supplement competency-based assessment. This pilot study suggests EPAs are feasible and well accepted by dietetic students and their supervisors.

**Contact Author:** Andrea Bramley - a.bramley@latrobe.edu.au

#### **ID: 106 | Dietary trajectories across childhood are associated with blood pressure at age 10: Findings from the Longitudinal Study of Australian Children**

Denelle Burgess<sup>1</sup>, Karen Charlton<sup>1</sup>, Danielle Schoenaker<sup>2</sup>

<sup>1</sup>University of Wollongong, <sup>2</sup>University of Southampton

**Background:** Cardiometabolic risk factors, including hypertension, are increasingly appearing in childhood. Current evidence on the association between childhood diet and blood pressure is inconclusive and limited to cross-sectional studies.

**Aim:** To examine the associations between dietary patterns across childhood and subsequent blood pressure, and whether these associations are explained by BMI.

**Methods:** Data from 4314 children aged 2 to 10 who participated in the Longitudinal Study of Australian Children were analysed. Dietary scores were computed based on similarity of intake to the Australian Dietary Guidelines. Group-based trajectory modelling was used to identify distinct dietary trajectories based on participant's individual dietary scores at up to five timepoints between age 2 to 10. Linear regression models tested the association between trajectory groups and blood pressure

measured at age 10. Models were adjusted for relevant covariates and BMI.

**Results:** Four dietary trajectories were identified, labelled as “never healthy” (5.8%), “moderately healthy” (6.5%), “becoming less healthy” (29.9%) and “always healthy” (57.9%). Children in the “always healthy” trajectory had a lower systolic ( $-2.14$  mmHg, 95% CI  $-3.54$  to  $-0.74$ ) and diastolic blood pressure ( $-2.03$ ,  $-3.11$  to  $-0.95$ ), compared with children in the “never healthy” trajectory after covariate adjustment. These associations were slightly attenuated after additional adjustment for BMI.

**Conclusion:** Children with a dietary pattern consistently aligned with the Australian Dietary Guidelines have lower blood pressure at age 10, and this is not fully explained by BMI. Therefore, it is essential to encourage the development of healthy dietary patterns in childhood to attenuate the increasing burden of cardiometabolic risk.

**Contact Author:** Denelle Burgess - denelle.burgess@hotmail.com

#### **ID: 140 | Exploring patient and staff perspectives on mealtime experience and their preferences for providing feedback**

Isabella Cameron<sup>1</sup>, Chloe Vadiveloo<sup>1</sup>, Molly Vallance<sup>1</sup>, Samantha King<sup>2</sup>, Annie-Claude Lassemillante<sup>1</sup>

<sup>1</sup>Swinburne University of Technology, <sup>2</sup>Austin Health

**Background:** Malnutrition remains a significant issue in hospitals. Expanding research suggests that organisational, physical and social factors are contributing to a negative meal experience and consequently, reducing a patient's dietary intake. A patient-centred food service model, that allows consumer involvement and feedback, may improve patient mealtime experiences and inadvertently improve clinical outcomes. There is therefore a need to design a mealtime experience measurement tool that incorporates best practice evidence and consumers' perspective.

**Aim:** To gather patient and staff perspectives on inpatients mealtime experience, which will be used to inform the development of a tool at Austin Health.

**Methods:** This was a qualitative phenomenological study that adopted a two-phase design over a five-month period. Thirty-six participants (patients ( $n = 21$ ) and staff ( $n = 15$ )), located across three sites, were interviewed about their perspective on mealtime experience and preferences for providing feedback. Responses to mealtime experiences were analysed thematically and feedback preferences were analysed using content analysis.

**Results:** Two main themes emerged: (i) patient-centred care and (ii) dining environment: “enjoyment of eating.”

Within patient-centred care, the subthemes were wanting to be heard, importance of feedback and giving feedback. The subthemes within dining environment included mealtime environment, quality of food, staff interactions/assistance and expectation vs reality. Patients preferred to give verbal feedback and staff preferred feedback to be administered on a quarterly basis.

**Conclusion:** Findings provide insight about mealtime experiences and the components of meal service that are important to patients. Results were used to develop an innovative quantitative tool to measure inpatient mealtime experiences.

**Contact Author:** Isabella Cameron - bellacameron9@gmail.com

### **ID: 156 | Transforming the role of foodservices in residential aged care homes is key for systems change**

**Danielle Cave**<sup>1</sup>, Karen Abbey<sup>1</sup>, Sandra Capra<sup>1</sup>

<sup>1</sup>*The University of Queensland*

**Background:** Foodservices in aged care homes are critical for residents. The role of foodservices can be poorly understood due to high staff turnover, poor language skills and lack of detailed understanding of the system itself.

**Aim:** To explore why food-first strategies are not sustainable in aged care homes and to identify opportunities for making positive changes. The questions guiding the enquiry were: what is the perspective of key stakeholders on the role of foodservices and do staff have adequate skills, time and ability to deliver appropriate foods and meals?

**Methods:** Semi-structured interviews were conducted with dietitians, carers, foodservice staff and managers from aged care homes across Australia. Participants were recruited purposively through mailing lists and snowballing. Of 24 who expressed interest, 21 (88%) interviews were recorded, transcribed verbatim and analysed using inductive thematic analysis according to the method of Braun and Clarke (2006).

**Results:** Three themes (with six sub-themes) were identified. These were, “the role of foodservices is more than just serving food”, “teamwork between all staff to champion nutrition” and “workplace culture that values continuous improvement”. Respondents tended to see the system from their own perspective.

**Conclusion:** There was no universally held position on the role of foodservices. There is a need for greater understanding and change at the systems level if the issues within foodservices are to be resolved. Dietitian-nutritionists need to work as part of a team to champion

nutrition and advocate for a strong and explicit focus on resident-centred care.

**Contact Author:** Danielle Cave - d.cave@uq.edu.au

### **ID: 74 | Health professionals and pregnant women: Comparing knowledge, beliefs and attitudes of lifestyle behaviours during pregnancy**

**Bridget Cockburn**<sup>1</sup>, Sophie Cashel, Catherine Knight-Agarwal<sup>1</sup>, Michelle Minehan<sup>1</sup>, Monica Yuri Takito<sup>2</sup>

<sup>1</sup>*University of Canberra*, <sup>2</sup>*University of Sao Paulo*

**Background:** Pregnancy is often described as an influential life stage for women, where regular contact with health professionals may play an important role in their health and lifestyle awareness.

**Aim:** To explore the knowledge, practices and beliefs of health professionals and pregnant women regarding physical activity, nutrition and weight management during the antenatal period.

**Methods:** A qualitative study was undertaken in south eastern Australia, of individual interviews with eligible participants. Recruitment sought women of gestation >12 weeks, experiencing an uncomplicated pregnancy (n = 6) and antenatal health professionals (n = 5) including midwives (n = 4) and an obstetrician (n = 1). Data were analysed using interpretive phenomenological analysis.

**Results:** Four major themes emerged: (1) Women rely on multiple sources of pregnancy-related health information; (2) Discussions around nutrition and exercise are low priority and often inconsistent; (3) Sensitive topics make some conversations difficult; (4) Barriers exist to behavioural change in pregnancy. Pregnant women expressed gaps in lifestyle-related knowledge and education being provided by health professionals. In turn, health professionals expressed difficulty discussing sensitive topics with pregnant women and had limited knowledge of clinical practice pregnancy care guidelines.

**Conclusion:** The themes generated by this study form the foundation for further research to inform clinical policy and practice regarding lifestyle advice in antenatal care.

**Contact Author:** Bridget Cockburn - bridget.cockburn@yahoo.com.au

### **ID: 182 | Dietary and quality-of-life outcomes of a personality targeted intervention for addictive overeating: FoodFix**

**Rebecca Collins**<sup>1</sup>, Kirsti Haracz<sup>1</sup>, Megan Rollo<sup>1</sup>, Mark Leary<sup>1</sup>, Caroline Davis<sup>2</sup>, Tracy Burrows<sup>1</sup>

<sup>1</sup>*University of Newcastle*, <sup>2</sup>*York University*

**Background:** Addictive eating, also referred to as food addiction (FA) or compulsive overeating, is a topic of increasing interest but not defined as a disorder by the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). Currently, the most common form of treatment for addictive overeating is self-help programs, accessible online with minimal input from qualified health professionals.

**Aim:** To evaluate secondary outcomes of dietary intakes and quality of life outcomes from a personality-targeted motivational interviewing intervention in adults above their healthy-weight range with symptoms of addictive eating behaviours as defined by the Yale Food Addiction Scale.

**Methods:** Individuals participated in the three-month, three session FoodFix intervention with dietary outcomes assessed by the Australian Eating Survey and quality of life assessed using the SF-36 at baseline and 3-months at the end of the intervention. Sessions were conducted by dietitians using telehealth. The 52-participants were randomised to either intervention or control.

**Results:** While there were no statistically significant dietary changes or quality of life improvements at 3 months, there were changes in a positive direction to improve health, specifically in the intervention group for sugar intake, and emotional impact on role limitations.

**Conclusion:** This intervention has highlighted the possibility of dietary behaviour change by those who additively overeat and that these changes can lead to improvements in quality of life.

**Contact Author:** Rebecca Collins, Rebecca.Collins10@uon.edu.au

#### ID: 109 | Strategies to divert food waste from landfill: a review of hospital food services worldwide

Nathan Cook<sup>1</sup>, Denise Goodwin<sup>1</sup>, Judi Porter<sup>2</sup>, Jorja Collins<sup>3</sup>

<sup>1</sup>Monash University, <sup>2</sup>Deakin University, <sup>3</sup>Eastern Health

**Background:** Food waste comprises up to 50% all waste in hospitals. Therefore effective strategies are required to manage and dispose of waste generated in hospital foodservices to minimise environmental impacts.

**Aims:** To investigate strategies used in hospital foodservices that divert food waste from landfill and report their financial, environmental and staffing outcomes and the barriers and enablers to implementation.

**Methods:** A systematic review was conducted searching seven electronic databases, Google Advanced and

19 targeted websites. Two step selection was completed in duplicate to find records about reuse, recycling or recovery of energy from food/food related waste compared to sending it to landfill in a hospital food service and the financial, environmental or staffing outcomes. Quality of peer reviewed studies was assessed with a validated tool.

**Results:** Four peer reviewed and 72 grey literature documents reported on 80 food waste management strategies: food donation (n = 20); animal feed (n = 2); industrial use (n = 9); composting (n = 32) and other (n = 17). These approaches had the capacity to reduce waste hauling fees (n = 14) and reduce staff handling of waste (n = 3) in addition to decreasing the amount of waste sent to landfill. Barriers were contamination of waste streams and equipment problems while enablers included leadership and time-neutral changes.

**Conclusion:** This review highlights many examples of hospital foodservices managing their food waste responsibly, and the benefits. Dietitians can use this evidence to advocate for strategies that divert food waste away from landfill.

**Contact Author:** Nathan Cook - nathan.cook@monash.edu

#### ID: 144 | "It's natural, so it should not hurt me": The dietitian's role in complementary and alternative medicine use during chemotherapy

Megan Crichton<sup>1</sup>, Katelyn Strike<sup>1</sup>, Elizabeth Isenring<sup>1</sup>, Alexandra McCarthy<sup>4</sup>, Wolfgang Marx<sup>2,3</sup>, Anna Lohning<sup>1</sup>, Skye Marshall<sup>1,5</sup>

<sup>1</sup>Bond University, <sup>2</sup>Deakin University, <sup>3</sup>IMPACT,

<sup>4</sup>University of Queensland, <sup>5</sup>Nutrition Research Australia

**Background:** Despite uncertainty regarding safety and efficacy, 40% to 80% of cancer patients use complementary and alternative medicines (CAMs) during chemotherapy. This CAM use is often self-prescribed and undisclosed to health professionals.

**Aim:** To explore patients' perspectives, experiences, support needs, and sources of information regarding CAM use during chemotherapy and their implications for dietetic practice.

**Methods:** Semi-structured interviews were conducted in adult participants who recently completed chemotherapy treatment at a public hospital in Brisbane, Australia. Interviews were transcribed verbatim and thematically analysed by three investigators.

**Results:** Ten participants were interviewed (70% female, 80% >55 years). These participants who received

chemotherapy valued CAMs as a natural complement to chemotherapy to improve wellbeing, with their use most strongly influenced by past experiences rather than expert advice. Participants' trust in CAM knowledge and hope for improved wellbeing was influenced by a vulnerability to external opinions.

**Conclusion:** CAM was highly valued by some chemotherapy patients; who felt it played an important role in supporting their cancer treatment journey. Health professionals would benefit from education on how to best inform patients of the potential risks, harms, and lack of efficacy for CAM use during chemotherapy in a way that does not stigmatise patients.

**Contact Author:** Megan Crichton - mcrichto@bond.edu.au

### ID: 206 | University food pantries, the importance, challenges, and sustainability

Cindy Daradong<sup>1</sup>, Sarah White<sup>1</sup>, Claire Russell<sup>1</sup>, Tanya Lawlis<sup>1</sup>

<sup>1</sup>University of Canberra

**Background:** University students are at risk of developing food insecurity due to reduced work availability and high living costs. On-campus food pantries can address food insecurity, by supplying students with access to free nutritious food.

**Aim:** To investigate the importance, challenges, benefits and sustainability in the development and operation of an on-campus food pantry.

**Methods:** A qualitative study comprising four semi-structured interviews with university management staff was conducted. Questions focused on the development and operation of the food pantry. One-hundred and one students completed an online survey, comprising qualitative and quantitative questions relating to food insecurity and food pantry use. The qualitative data from the survey was used for this study. Thematic analysis was conducted to identify key themes.

**Results:** Three themes were identified amongst staff: the challenges, the benefits, and strategies for sustainability of the food pantry. Main challenges were costs, food diversity and stock availability. Benefits included decreases in mental, physical, and financial stress, and increased sense of community and student support. Student engagement, food literacy and financial knowledge were identified as future sustainability strategies. Prominent themes for student pantry use were to ease financial burden and to purchase additional and essential food items.

**Conclusion:** Food pantry programs are an important component of the university landscape as they not only provide access to food but a sense of community, security, and stability for the student community. Ensuring sustainability of food pantry programs is key to helping students navigate and survive the challenges of being a university student.

**Contact Author:** Claire Russell - claire russell@live.com.au

### ID: 125 | Does capsaicin “beige” human white fat that has been transplanted in to mice and exhibit improvements in mouse metabolism?

Sarah Davis<sup>1</sup>

<sup>1</sup>Westmead Institute for Medical Research

**Background:** Obesity is a major health concern and increases risk of metabolic syndrome, type 2 diabetes, dyslipidemia, cardiovascular diseases and many cancers. Obesity occurs with decreased physical activity and increased caloric intake. Clinical management is still limited. Brown adipose tissue is a thermogenic organ which expresses uncoupling protein 1. When activated it increases energy expenditure by up to 20%. Recent evidence suggests that white adipose tissue can be ‘browned’ and have similar characteristics, called beige fat.

**Aim:** To test a “beiging” agent capsaicin to determine whether it could brown human fat and improve metabolism.

**Methods:** We used a “Humanised Mouse Model” where human fat is inserted intra-abdominally in immune suppressed mice (to avoid rejection). Mice were fed ad libitum normal or a high fat diet (45% calories from fat) ± 0.03% capsaicin. Metabolic studies were conducted before and after fat transplant and 12 weeks on diets. These studies included glucose and insulin tolerance tests and metabolic cages. mRNA and histology samples were taken.

**Results:** Results show increases in energy expenditure (vCO<sub>2</sub> and vO<sub>2</sub>) in mice fed capsaicin compared to their respective controls. High fat diet + capsaicin fed mice showed improvements in glucose tolerance and insulin sensitivity. The human fat showed up-regulation of uncoupling protein 1.

**Conclusion:** These results indicate beiging of human white fat is possible and has the potential to improve metabolism. A 20% increase in energy expenditure has the potential to cause clinically significant improvements in obesity. Further studies will examine combination therapies.



**Contact Author:** Sarah Davis - sarahjanedavis@hotmail.com

### ID: 51 | Variations in perioperative nutrition care in Upper GI cancer: findings from the Australia wide NOURISH study

**Irene Deftereos**<sup>1,2</sup>, Justin Yeung<sup>2</sup>, Elizabeth Isenring<sup>4</sup>, Vanessa Carter<sup>1</sup>, Nicole Kiss<sup>3</sup>

<sup>1</sup>Western Health, <sup>2</sup>University of Melbourne, <sup>3</sup>Deakin University, <sup>4</sup>Bond University

**Background:** Prevention of malnutrition and provision of nutrition support are strongly recommended for patients with upper gastrointestinal (UGI) cancer to optimise outcomes.

**Aim:** To determine current nutritional status of patients and perioperative nutrition interventions received in the Australian UGI cancer surgery setting.

**Methods:** A prospective point prevalence study was conducted at 27 tertiary hospitals across six states between September 2019 and May 2020. Data on nutritional status (using subjective global assessment) and perioperative nutrition intervention were collected from UGI cancer patients undergoing curative resection.

**Results:** Two hundred patients participated with a mean age of  $67 \pm 10$  years and majority (59%) males. There were 66 (33%) oesophagectomy, 51 (25%) gastrectomy and 83 (42%) pancreatic resections. Malnutrition prevalence was 42% (95% CI 35-49%), with no difference between surgical procedures ( $P = .864$ ). Only 59% received dietetics input preoperatively. Patients undergoing pancreatectomy were less likely to receive preoperative dietetics care than oesophagectomy/gastrectomy (43% vs 73%,  $P < .001$ ), whilst those having neo-adjuvant therapy were more likely to access dietetics care than those who did not (77% vs 44%,  $P < .001$ ). Although more malnourished patients received nutrition support than well-nourished patients (57% vs 39%,  $P = 0.014$ ), 43% of malnourished patients did not receive any nutrition support. Dietetic follow up was arranged for 91% of patients, mostly within 2 weeks of discharge (54.8%), 23% within 2 to 4 weeks and 9.3% within 4 to 8 weeks.

**Conclusion:** Nutrition support practices are inadequate and highly varied across health services despite recommendations outlined in practice guidelines. Improved nutrition support and standardisation of services across Australia is required.

**Contact Author:** Irene Deftereos, irene.deftereos@unimelb.edu.au

### ID: 112 | Perioperative nutrition support in abdominal surgery: The evidence says it's important, but what do doctors think?

**Irene Deftereos**<sup>1,2</sup>, Danielle Taylor<sup>1</sup>, Aurora Ottaway<sup>1</sup>, Justin Yeung<sup>2</sup>

<sup>1</sup>Western Health, <sup>2</sup>University of Melbourne

**Background:** Malnutrition is associated with increased morbidity and mortality in abdominal surgery, and early identification and treatment is recommended. However, there is limited research regarding knowledge and attitudes of surgical staff regarding perioperative nutrition in Australia.

**Aim:** To investigate doctor's knowledge and perceptions of perioperative nutrition support in abdominal surgery.

**Methods:** A purpose built, 25-item anonymous survey was distributed to doctors working in a large tertiary institution via REDCap, with results summarised descriptively.

**Results:** There were 43 participants (30.2% residents, 25.6% interns, 23.3% registrars and 20.9% consultants). Seventy-seven percent reported no prior training/teaching regarding nutrition support in abdominal surgery. Only 16.3% felt they had adequate knowledge regarding the evidence for nutrition support in abdominal surgery and only 20.9% felt they had adequate skills to identify malnutrition. Only 37.2% understood that pre-operative fasting from midnight is not usually necessary and 67.4% were unable to correctly identify risk of malnutrition in a surgical patient. Ninety-three percent understood that nutritional status should be assessed pre-and post-operatively, however 51.5% did not know the appropriate timing and indications for introducing parenteral nutrition. Whilst 100% agreed that malnutrition leads to poor patient outcomes and is important to address, the majority (90.7%) felt that they needed more education. Time constraints were identified as a barrier to addressing nutritional status for 65.1%.

**Conclusion:** The results of this survey indicate that doctors understand the importance of optimising nutrition in abdominal surgery, however, most do not understand how and when to implement nutritional care and require further education.

**Contact Author:** Irene Deftereos - irene.deftereos@unimelb.edu.au

### ID: 187 | No association between dairy consumption and first clinical diagnosis of central nervous system demyelination

**Rachel Dieu**<sup>1</sup>, Alison Daly<sup>2</sup>, Robyn Lucas<sup>3</sup>, Yasmine Probst<sup>4</sup>, Lucinda Black<sup>1</sup>

<sup>1</sup>Curtin University, <sup>2</sup>Curtin University, <sup>3</sup>The Australian National University, <sup>4</sup>University of Wollongong

**Background:** Some ecological studies suggest a positive link between dairy consumption and risk of multiple sclerosis (MS), and several restrictive diets promoted for people with MS exclude dairy.

**Aim:** To test associations between dairy consumption and the likelihood of a first clinical diagnosis of central nervous system demyelination (FCD), a common precursor to MS.

**Methods:** We used data from the 2003 to 2006 Ausimmune Study, an Australian matched, case-control study. Participants were recruited from four regions of Australia and dietary intake data were collected using a food frequency questionnaire (272 cases, 519 controls). We excluded 17 participants with implausible energy intakes (20 000 kJ/day). Dairy consumption (servings/day) was calculated by summing the servings per day of milk (full fat, reduced fat, skim), cheese (hard, soft, cream cheese, low fat, ricotta) and yoghurt. Dairy consumption was energy-adjusted using the residual method. We used propensity score matching to test the associations between energy-adjusted dairy consumption and the likelihood of FCD, with full matching for age, sex, study region, education, smoking history, history of infectious mononucleosis, serum 25-hydroxyvitamin D concentrations, and dietary misreporting. Interactions were explored.

**Results:** There was no association between consumption of dairy (per one energy-adjusted serving/day) and the likelihood of FCD (adjusted odds ratio = 0.99; 95% confidence interval = -0.78, 1.26;  $P = .951$ ). No interactions were statistically significant.

**Conclusion:** In this Australian population, there was no association between dairy consumption and likelihood of FCD; hence, those at high risk of FCD, or of MS, may not need to avoid dairy products.

**Contact Author:** Rachel Dieu - dieurachel@gmail.com

### ID: 113 | What do health professionals and parents want as part of an online childhood obesity prevention program?

Clare Dix<sup>1</sup>, Jessica Hardt<sup>2</sup>, Rebecca Watson<sup>3</sup>, Jacqueline Walker<sup>1</sup>, Robyn Littlewood<sup>3</sup>

<sup>1</sup>University of Queensland, <sup>2</sup>Children's Health Queensland Hospital and Health Service, <sup>3</sup>Health and Wellbeing Queensland

**Background:** There are limited evidence-based referral options for children living in Queensland who are at risk of overweight or obesity. Despite the known effectiveness, no accessible online prevention program currently exists in Queensland.

**Aim:** To understand the perspectives of health professionals and parents/guardians regarding key aspects of an online childhood overweight and obesity prevention program.

**Methods:** This pragmatic, mixed-methods study was conducted from March to December 2020. Recruitment included participants from two distinct groups actively involved with children aged 2 to 17 years; health professionals and parents/guardians. Phase 1 involved dissemination of an online survey. Questions addressed program structure, content delivery (including nutrition, physical activity and parenting practices), program evaluation and information dissemination. Descriptive statistics were used to describe survey data to inform the delivery of focus groups in Phase 2. Two focus groups further explored the topics. Thematic analysis was used to investigate qualitative data.

**Results:** Twenty-eight health professionals and 11 parents/guardians completed the survey; 14 health professionals and six parents/guardians participated in the focus groups. Participants believed the most beneficial approach would target a younger age group with family-based interventions, via a non-traditional and tailored structure. There was a strong preference for interactive content, gamification to engage children, and practical resources to translate knowledge into practice. Parents emphasised that there should be no assumption of knowledge, with storytelling and real-time feedback utilised to maximise engagement.

**Conclusion:** Participants provided clear direction regarding key aspects for future development of an online prevention program, highlighting the importance of the incorporation of co-design principles.

**Contact Author:** Jacqueline Walker - j.walker3@uq.edu.au

### ID: 124 | Malnutrition in dementia outpatients: Let us not forget what the patient wants

Alice Doring<sup>1</sup>, Hannah Rigby<sup>1</sup>, Jenna Stonestreet<sup>1</sup>, Kannan Natarajan<sup>1</sup>, Jack Bell<sup>1</sup>

<sup>1</sup>Queensland Health

**Background:** International guidelines recommend nutrition assessment and intervention for those identified at risk of malnutrition. Evidence regarding whether this aligns with the treatment preferences for patients with dementia remains unclear.

**Aim:** To (i) describe the level of importance placed on nutrition interventions; and (ii) explore preferences for nutrition service delivery, for community dwelling older adults living with dementia.

**Methods:** Prospectively, consecutively, recruited patients with geriatrician diagnosed dementia (DSM-V criteria) presenting to memory clinic at a tertiary hospital. A five-point Likert scale question and a multiple-choice question were drafted by treating clinicians, distributed to experts in field for face validity, and pre-piloted. Two clinicians, not providing direct care, assisted patients and dyads to complete the questions with the assistance of a visual poster.

**Results:** A preliminary sample of 26 surveys have been completed to date (n = 14 male, mean age 79 years); four additional patients/dyads declined participation. Substantial variation was observed regarding the importance placed on nutrition interventions; seven patients favoured food for enjoyment, 10 favoured food as medicine, and nine were ambivalent. The majority of patients preferred to receive nutrition information from their current healthcare provider (n = 11), although others preferred dietitian delivered information (n = 8) or did not want to receive nutrition information (n = 7).

**Conclusion:** Patients with dementia and their dyads have diverse preferences regarding nutrition interventions, and who should provide these. Treating clinicians should engage patients and dyads in informed shared decision-making processes to support deliver of care aligned to the patient's best interest.

**Contact Author:** Alice Doring - [alice\\_doring07@hotmail.com](mailto:alice_doring07@hotmail.com)

### ID: 208 | A new comprehensive analytical vitamin D food composition database of Australian foods

Eleanor Dunlop<sup>1</sup>, Anthony James<sup>1</sup>, Judy Cunningham<sup>1</sup>, Norbert Strobel<sup>2</sup>, Robyn Lucas<sup>3</sup>, Mairead Kiely<sup>4</sup>, Caryl A Nowson<sup>5</sup>, Anna Rangan<sup>8</sup>, Paul Adorno<sup>6</sup>, Paul Atyeo<sup>7</sup>, Lucinda Black<sup>1</sup>

<sup>1</sup>Curtin University, <sup>2</sup>National Measurement Institute, <sup>3</sup>The Australian National University, <sup>4</sup>University College Cork, <sup>5</sup>Deakin University, <sup>6</sup>National Measurement Institute, <sup>7</sup>Australian Bureau of Statistics, <sup>8</sup>University of Sydney

**Background:** Low vitamin D status (serum 25-hydroxyvitamin D concentrations (25(OH)D) <50 nmol/L) is a global health problem affecting 23% of Australian adults, including 32% of young adults. Increasing dietary vitamin D (eg, by fortification) may offer a potential solution; however, limited vitamin D food composition data have precluded estimation of usual intakes and modelling of fortification strategies to ensure safety.

**Aim:** To measure vitamin D<sub>3</sub>, 25(OH)D<sub>3</sub>, vitamin D<sub>2</sub> and 25(OH)D<sub>2</sub> in commonly-consumed Australian foods likely to contain vitamin D.

**Methods:** Samples (n = 896) representing 99 products were purchased in one to three cities (Sydney, Melbourne, Perth) in 2018 to 2019. Composite samples (n = 149) were analysed in duplicate at the National Measurement Institute using liquid chromatography with triple quadrupole mass spectrometry (VL454).

**Results:** Vitamin D was detected in 81% of foods, and vitamin D equivalents (VDE = sum of four vitamers) were ≥ 0.1 µg/100 g in 62% of foods. The greatest concentrations of VDE were found in canned salmon (19.5 µg/100 g), Milo powder (18.3 µg/100 g) and margarine spread (12.1 µg/100 g). Vitamin D<sub>2</sub> and 25(OH)D<sub>2</sub> were found in various meat products, despite being rarely measured in these foods.

**Conclusion:** Our data will be made available for inclusion in the Australian Food Composition Database, providing a freely-available resource for health professionals, researchers, food industry stakeholders, food regulatory bodies and individuals. Globally, the data highlight the importance of analysing all four D vitamers to accurately represent vitamin D concentrations in food. Such data are essential for development of public health initiatives that address low vitamin D status.

**Contact Author:** Eleanor Dunlop - [eleanor.dunlop@curtin.edu.au](mailto:eleanor.dunlop@curtin.edu.au)

### ID: 151 | Empowerment as a novel approach to childhood weight management: A systematic review and evidence-informed protocol

Renaë Earle<sup>1</sup>, Jacqueline Walker<sup>1</sup>, Robyn Littlewood<sup>2</sup>, Simone Nalatu<sup>3</sup>

<sup>1</sup>The University of Queensland, <sup>2</sup>Health and Wellbeing Queensland, <sup>3</sup>Health and Wellbeing Queensland

**Background:** Empowerment interventions facilitate individuals, organisations and communities to gain better control over their health. They are distinctly different from traditional behaviour-change models and encourage participants to set their own health priorities and agenda. Current evidence suggests empowerment interventions are efficacious for smoking, sexual and mental health outcomes. However, empowerment in childhood obesity is under-researched.

**Aim:** To systematically analyse the evidence for empowerment approaches in childhood weight management.

**Methods:** A comprehensive search strategy was applied to five databases and identified 29 relevant papers. Evidence was appraised using The Academy of Nutrition and Dietetics Quality Criteria Checklist and NHMRC Levels of Evidence.

**Results:** Almost all studies rated positive ( $n = 25$ ) and four rated neutral. Overall, the evidence body rated 'B'. 72% of the 3318 participants included in this review were from underserved backgrounds, highlighting the unique ability of empowerment interventions to successfully engage priority populations - a persistent barrier in current healthy weight research. Results demonstrate small to large improvements in participant body mass index with effect sizes ranging from 0.08 to 1.13. Significantly, all studies were set in America or Canada. Hence, translation to the Australian setting is warranted.

**Conclusion:** This review will inform the development of the first empowerment-focussed Australian childhood weight management program. Based on previous empowerment research, health-service delivery gaps and community priorities, this program will holistically support rural Aboriginal and Torres Strait Islander adolescents to achieve a healthy weight. If successful, empowerment interventions represent a unique opportunity to meaningfully integrate self-determination to clinical practice.

**Contact Author:** Renae Earle - renaearle@gmail.com

#### **ID: 61 | The relationships between online social networks, fad diets and mental health**

**Melissa Eaton**<sup>1</sup>, Yasmine Probst

<sup>1</sup>University of Wollongong

**Background:** Social media provides the ideal platform to share nutrition information, for communities to connect, and for misinformation to spread. However, research exploring online networks and nutrition misinformation is limited.

**Aim:** To explore the relationships between online social networks, fad diets and mental health, to understand information dissemination, influential voices and interactions between online diet communities.

**Methods:** This exploratory study utilised Twitter posts as data for an online social network analysis. Fad diet keywords were systematically developed and data were collected and analysed using the NodeXL metrics tool to determine key network metrics. (vertices, edges, cluster-algorithms, graph-visualisation, centrality measures and text-analysis).

**Results:** This study identified (i) vegan and keto diets as the largest networks, and zone-diet as the smallest. Brand-clusters and broadcast-messaging were the dominant network structures; (ii) 31% ( $n = 54$ ) of top users endorsed the corresponding diet, and 11% ( $n = 19$ ) had a health and/or science education; (iii) 11 of the 16 networks interacted, where keto was mentioned the most; and (iv) depression, anxiety, and eating disorder salience

was the greatest in the 'zone-diet' network, and the least in 'soy-free,' vegan, 'dairy-free' and 'gluten-free.'

**Conclusion:** Social media activity reflects fad diet trends and provides a platform for misinformation to spread through re-sharing. Further network analysis, longitudinal and survey research is needed to explore fad diet networks overtime and further understand the impact social media can have over dietary choices. Social media training is vital for health professionals, and for dietitians to work together as a community by actively re-sharing posts online.

**Contact Author:** Melissa Eaton - mce527@uowmail.edu.au

#### **ID: 60 | Public health messaging to avoid ultra-processed foods - the potential for unintended consequences for whole grain intake**

**Madeline Estell**<sup>1</sup>, Eden Barrett<sup>2</sup>, Katrina Kissock<sup>1</sup>, Sara Grafenauer<sup>3</sup>, Julie Jones<sup>4</sup>, Eleanor Beck<sup>5,6</sup>

<sup>1</sup>University of Wollongong, <sup>2</sup>Australian National University, <sup>3</sup>Grains & Legumes Nutrition Council,

<sup>4</sup>Catherine's University Minnesota, <sup>5</sup>School of Medicine, University of Wollongong, <sup>6</sup>Illawarra Health & Medical Research Institute

**Background:** Use of the NOVA food classification system has linked intake of ultra-processed foods (UPF) to non-communicable diseases. Fortified whole-grain products (predominately bread and breakfast cereal in Australia), are classified as UPF despite being core foods according to Australian Dietary Guidelines. In Australia, whole-grain intake already falls short of the suggested 48 g/day.

**Aim:** To determine how whole-grain foods are classified within NOVA and review impacts on dietary intake if grain-based UPF were excluded. Design: A quantitative analysis of whole-grain and other nutrient intake based on dietary recalls from the National Nutrition and Physical Activity Survey 2011 to 12 ( $n = 12\ 153$ ) with and without the inclusion of grain-based UPF. Dietary modelling examined nutritional adequacy of a sample diet matching Australian Dietary Guidelines and another excluding grain-based UPF.

**Results:** UPF exclusion reduced the theoretical median whole-grain intake from 24.1 to 9.3 g. There was a significant decrease (all  $P < .05$ ) in intake of key nutrients when grain-based UPFs were excluded. Despite this, whole-grain target intakes can be achieved with replacement foods such as homemade bread and muesli. Thiamin, folate and iodine intakes were lower when grain-based UPF are excluded, as substitutions are not

fortified. This may be of particular concern for at-risk groups such as women of childbearing age, and may negate health benefits made by grain fortification.

**Conclusion:** In Australia, discouraging core whole-grain foods would potentially decrease whole-grain intake and affect intake of nutrients usually consumed in grain foods. Re-classification of recommended whole-grain and fortified foods within NOVA is suggested.

**Contact Author:** Madeline Estell - maddy.estell14@gmail.com

### ID: 191 | Diet, fertility and the Australian primary health care setting - a review

Georgia Fassoulidis Pandelios<sup>1,2</sup>, Rachel Laws<sup>1</sup>, Lisa Moran<sup>3</sup>, Karen Campbell<sup>1</sup>

<sup>1</sup>Deakin University, <sup>2</sup>Nutrition Prescription with Kardinia Health, <sup>3</sup>Monash University

**Background:** The relationship between diet and fertility continues to emerge, yet interventions underutilise this evidence within Australian primary health care (PHC). Infertility affects approximately 9% of the world's population and 16% of Australian couples trying to conceive naturally. Current PHC practices do not address nor encourage improved diet for sperm and oocyte quality, ovulation and sperm production. Due to a lack of resources and training, general practitioners typically refer these individuals to fertility clinics for medical management. As a result, Australia ranks as the sixth highest global utiliser of assisted reproductive technology, with annual costs to treat infertility exceeding \$46 000 000.

**Aim:** To synthesise current evidence for the diet-fertility relationship and identify suitable PHC interventions for improving fertility related lifestyle risk factors.

**Methods:** A database search for published peer reviewed articles using MEDLINE, Scopus, Google Scholar, PubMed and Global Health was conducted and narratively synthesised.

**Results:** Poor diet, central adiposity and unhealthy weight are modifiable risk factors impacting fertility, and common amongst the Australian adult population. There are opportunities to address these risk factors by modifying existing lifestyle modification programs to improve the overall fertility profile of this demographic within PHC.

**Conclusion:** It is possible to optimise fertility through lifestyle interventions that encompass dietary modification. Health and fertility treatment costs can potentially be improved if changes to diet and lifestyle are consistently addressed as first line management for infertility within PHC for appropriate individuals. Understanding

evidence for interventions have importuning implications for policy and practice. Further work needs to describe how fertility lifestyle interventions can successfully translate into PHC practice.

**Contact Author:** Georgia Fassoulidis Pandelios - gfassoulidis@deakin.edu.au

### ID: 92 | Is it possible to optimise multidisciplinary support through transforming models of care post-stem cell transplant?

Rebecca Fichera<sup>1</sup>, Midori Nakagaki<sup>1</sup>, Nicole Gavin<sup>1</sup>, Therese Hayes<sup>1</sup>, Leonie Naumann<sup>1</sup>, Justine Brennan<sup>1</sup>, Natasha Perry<sup>1</sup>, Carolline Stewart<sup>1</sup>, Jenni Leutenegger<sup>1</sup>, Emma Foley<sup>1</sup>, Erin Crofton<sup>1</sup>, Christie Brown<sup>1</sup>, Glen Kennedy<sup>1</sup>

<sup>1</sup>The Royal Brisbane and Women's Hospital

**Background:** Toxicities of stem cell transplant (SCT) have a profound impact on nutrition status, physical function and wellbeing, persisting long after discharge from acute care facilities. Historically follow-up post-discharge is by physicians only, with ad hoc allied health review usually at the discretion of the treating clinician or Haematologist. To address the service deficit, a nurse-led multidisciplinary clinic, including dietitian, nurse, pharmacy, social work, occupational therapy and physiotherapy was designed and implemented within a quaternary hospital oncology department.

**Aim:** To evaluate service outcomes and utilisation of dietetic-specific services in a nurse-led multidisciplinary clinic.

**Methods:** Occasions of service (OOS), interventions and satisfaction were collected pre and post-implementation for a 6-month period.

**Results:** Routine appointments were scheduled with all disciplines at 2 weeks post-discharge and 100-days post-transplant. 65 patients were reviewed with 475 OOS. 706 interventions included dietary and social work counselling, nurse education, medication lists, fatigue management and exercise programs. 29 patients and 77.8% physicians (n = 7) provided feedback which was very positive and positive respectively. Dietetic OOS increased 2.6-fold (n = 42 to 110) with 52.7% (n = 58) subsequent reviews compared with 16.7% (n = 7). Face-to-face encounters increased from 57.1% to 87.3% (n = 24 to 96). Appointment cancellations were comparable (6.7%). Documented discussions with physicians increased (n = 0-10) and handover was provided to General Practitioners (n = 33) and local hospitals (n = 4).

**Conclusion:** A novel nurse-led multidisciplinary clinic is effective in increasing access to multidisciplinary clinical

care post-SCT. The new model of care was well received by patients and physicians and facilitated improved coordination of patient care.

**Contact Author:** Rebecca Fichera, rebecca.fichera@health.qld.gov.au

### ID: 5 | Tackling malnutrition in hospitals: have we forgotten about older people admitted to mental health wards?

**Kate Flint**<sup>1</sup>, Kylie Matthews-Rensch<sup>2</sup>, Adrienne Young<sup>3,4,5</sup>

<sup>1</sup>*Solutions with Food*, <sup>2</sup>*QLD Health*, <sup>3</sup>*Nutrition & Dietetics, Royal Brisbane & Women's Hospital*, <sup>4</sup>*Metro North Hospital & Health Service*, <sup>5</sup>*The University of Queensland*

**Background:** Substantial research demonstrates that malnutrition and poor intake is common amongst older people in acute care, rehabilitation and aged care settings, with a range of evidence-based interventions available to improve nutritional care and intake. However, there is limited research in older psychiatric inpatients.

**Aim:** To describe energy and protein intakes of older psychiatric inpatients, and describe barriers to adequate intake.

**Methods:** Multiple case studies design was used to study patients (65+ years) admitted to a single mental health ward over a six-week period. Visual plate waste methods were used to measure daily dietary intake. Mealtime observations and medical record reviews were used to identify potential individual, foodservice and mealtime barriers. Daily energy and protein intakes for each individual participant were graphed, and narrative synthesis of cases was conducted to identify trends between cases.

**Results:** Of the eight patients studied, three had adequate energy and protein intake throughout the study period. For the five patients with inadequate intake, this could be explained by: inadequate food provided (lack of substantial snacks, inadequate food ordered; Cases 4 and 5), missing meals with no replacement offered (asleep, electroconvulsive therapy; Cases 6 and 7) and need for increased mealtime care (Case 8).

**Conclusion:** This study suggests that barriers to adequate intake in older psychiatric inpatients may be similar to those in other settings. Further research is needed to determine how foodservice and mealtime interventions can be implemented within this setting where overeating and weight gain may be concurrent issues.

**Contact Author:** Kate Flint - kate.flint5@gmail.com.

### ID: 152 | Can addressing food literacy across the life cycle improve the health of vulnerable populations?

**Frances Foulkes-Taylor**<sup>1</sup>, Roslyn Giglia<sup>1</sup>, Nerissa Le<sup>1</sup>, Michelle McIntosh<sup>1</sup>, Claire Celenza<sup>1</sup>, Julia Platts<sup>1</sup>, Lucy Butcher<sup>1</sup>

<sup>1</sup>*Foodbank WA*

**Background:** Food literacy programs improve an individual's knowledge and skills in the planning, management, selection, preparation, and eating of healthy foods. Unhealthy dietary patterns across the life cycle are associated with an increased risk of chronic disease. Foodbank WA's Healthy Food for All team has made addressing health inequity a priority, by enhancing food literacy skills of vulnerable people across the lifespan.

**Aim:** Foodbank WA's food literacy programs aim to improve the health behaviours, and health outcomes, of people at risk of experiencing social and economic disadvantage. Methods A case study approach was utilised to explore Foodbank WA's evidence-based food literacy programs: Food Sensations for Parents (of 0-5 year olds), Food Sensations for Schools (kindergarten to Year 12), Fuel Your Future (adolescents 12-18 years), and Food Sensations for Adults (18 years and over). These programs are contextualised to meet the needs of vulnerable groups at all life stages.

**Results:** In the last decade the Healthy Food for All team have delivered 5047 food literacy sessions to over 62 000 Western Australians. Evaluation results demonstrate the Food Sensations programs are successful at improving vulnerable people's food literacy skills and dietary behaviours. For example, over 70% of participants make at least one positive food literacy behaviour change after attending Food Sensations for Adults.

**Conclusion:** Foodbank WA's food literacy programs provide multiple opportunities for intervention over the life-cycle, to enhance health behaviours and reduce risk of chronic disease. Future Government investment in food literacy initiatives is vital to improving health outcomes in vulnerable populations.

**Contact Author:** Frances Foulkes-Taylor - frances.foulkes-taylor@foodbankwa.org.au

### ID: 88 | Exploring staff perceptions of mealtime experience at a rural hospital and its aged care facilities

**Brianna Free**<sup>1</sup>, Kellie Nguyen<sup>1</sup>, Sama Saleem<sup>1</sup>, Sara Mullery<sup>2</sup>, Annie-Claude Lassemillante<sup>1</sup>

<sup>1</sup>*Swinburne University of Technology*, <sup>2</sup>*Gippsland Southern Health Service*

**Background:** Mealtime experience is a key driver of adequate oral intake, and this impacts on malnutrition. There are many studies exploring mealtime experience from a patient or resident perspective, however, there is limited research investigating this from a staff perspective.

**Aim:** To gather feedback and insight of staff involved in foodservice into mealtime experience at a rural hospital and its aged care facilities.

**Methods:** This study was based on a phenomenological approach to gather qualitative data via semi-structured interviews. It was conducted at a rural hospital across two sites and three attached aged care facilities. Participants included staff members from various departments who are involved in all aspects of mealtime and food provisioning. Data were analysed via thematic analysis and the Five Aspect Meal Model was used as a framework to guide the analysis of data.

**Results:** Four main themes emerged relative to staff satisfaction and perception towards the current mealtime experience: perception of meals. Subthemes: experiences with variety, issues with texture modified diet, experiences with temperature; theme 2: consideration of older generation. subthemes: inappropriate texture, lack of familiarity; theme 3: high workload; theme 4: communication.

**Conclusion:** Findings outline the challenges associated with provision of a food service catering towards both hospital inpatients and aged care residents. These also align with the patient/resident perspective that is well documented in the literature. This study therefore adds to current knowledge which will help to transform the hospital menus, improve familiarity and mitigate risk of malnutrition.

**Contact Author:** Brianna Free - briannafree23@gmail.com.

### ID: 229 | The feasibility of an anti-inflammatory diet delivered via telemedicine in adults with knee osteoarthritis

Melanie Fulton<sup>1</sup>

<sup>1</sup>La Trobe University

**Background:** Knee osteoarthritis is an inflammatory condition with prevalence increasing with age and body weight. Non-steroidal anti-inflammatory drugs are often prescribed to reduce inflammation and symptoms, but are associated with established side effects. An anti-inflammatory diet may provide an alternative treatment to reduce inflammation and symptomatic progression,

yet research is limited. During the SARS-COV-2 (COVID-19) pandemic, the use of telemedicine has diversified, including dietary advice.

**Aim:** To determine the feasibility of an anti-inflammatory diet delivered via telemedicine in adults with knee osteoarthritis.

**Method:** This 9-week single-arm feasibility pilot study took place across Australia (March-July 2020). Twenty-eight participants diagnosed with moderate symptomatic knee osteoarthritis (average pain  $\geq 4/10$ ), aged 40-85 years and weight stable for 3 months received an anti-inflammatory diet intervention via telemedicine, supported by additional telemedicine consultations at three and 6 weeks timepoints. Feasibility was measured by recruitment and retention rate, adverse events and self-reported dietary adherence.

**Results:** 109 individuals underwent initial screening, from which 28 participants were enrolled and 22 (79%) completed final follow-up. Attendance of telemedicine consultations was 99%. Two participants experienced constipation related to the diet. Self-reported adherence to intervention at final follow-up was 27% adhering every day, 68% adhering most of the time and 5% adhering some of the time.

**Conclusion:** The feasibility of utilising telemedicine to effectively deliver an anti-inflammatory diet intervention in adults with knee osteoarthritis was supported. Findings highlight the opportunity to incorporate telemedicine into traditional diet intervention delivery methods.

**Contact Author:** Melanie Fulton - melanief282@gmail.com

### ID: 43 | Are plant-based meats really on the menu? Consumer and nutrition professional attitudes and perceptions

Sara Grafenauer<sup>1</sup>, Jaimee Hughes<sup>1</sup>, Madeline Estell<sup>2</sup>

<sup>1</sup>Grains & Legumes Nutrition Council, <sup>2</sup>University of Wollongong

**Background:** Plant-based and flexitarian eating patterns are increasingly popular, and the food supply has responded with a wide range of products despite a lack of understanding regarding consumer views.

**Aim:** To explore Consumer and nutrition professional perceptions and attitudes to plant protein, including plant-based meat alternatives within an Australian context.

**Methods:** A cross-sectional self-administered online survey was conducted between March 2020 and October 2020, promoted nation-wide via social media.

**Results:** A total of 679 eligible respondents attempted the survey (89% completion rate), achieved an even spread across key age groups. Sixty percent reported following a special diet with 25% Vegan and 19% Flexitarian. 'Health' was a key driver for diet type among the nutrition professionals (53.3%) while 'Ethical' reasons were cited by consumers (69%). Plant-based eating was considered a vegan dietary pattern and the most frequently consumed plant-based proteins were whole grains. Most (74%) had tried plant-based meat alternatives, with curiosity identified as the key driver for consumption. Taste was considered very important across both groups. Respondents reported looking for whole ingredients and iron content and expected that both iron and vitamin B<sub>12</sub> would be comparable to red meat. Sodium was the nutrient of greatest interest to nutrition professionals. Plant-based claims were observed by 78% but these were also of greater interest to consumers.

**Conclusion:** Findings help inform the direction for product innovation, while also highlighting the need to consider the entire dietary pattern when promoting sustainable plant-based eating.

**Contact Author:** Sara Grafenauer - sarag@gfnc.org.au

#### **ID: 245 | A comparison of Australian Dietary Guidelines to NOVA food classification system in predicting energy intakes, body mass index and nutrient density of the diet of Australian adults**

**Amanda Grech**<sup>1</sup>, Anna Rangan<sup>1</sup>, Stephen Simpson<sup>1</sup>, Timothy Gill<sup>1</sup>, David Raubenheimer<sup>1</sup>

<sup>1</sup>The University of Sydney

**Background:** The NOVA classification distinguishes foods by level of processing, with evidence suggesting that ultra-processed foods (UPF) lead to obesity. The Australian Dietary Guidelines (ADG), in contrast, discourage excess consumption of "discretionary foods" (DF), distinguished by their high saturated fat, added-sugars, alcohol, or sodium content. There is limited research that compares the classification systems in predicting health outcomes.

**Aim:** To compare DF with UPF for predicting energy intake, body mass index (BMI) and nutrient composition in Australia.

**Methods:** Participants in the Australian Health Survey 2011 to 12 were classified into tertiles of percentage energy (%E) from DF and UPF. Generalised-linear-models, adjusted for confounders, were used to assess outcomes.

**Results:** Forty-one %E came from UPF and 34.4%E came from DF. Non-protein energy intake increased 2134 kJ between lowest and highest tertile of DF ( $P < .001$ ) and 780 kJ for UPF ( $P < .001$ ). Protein-energy remained relatively constant across the tertiles. After adjusting for DF (%E), UPF intake was not associated with total energy. Lower DF and UPF intake were associated with decreased BMI (DF:  $-0.95$ ,  $P = .0145$ ; UPF:  $-0.46$ ,  $P = .0195$ ). Higher DF intake was a stronger predictor of lower dietary fibre, %E protein, and micronutrients and higher saturated fat and alcohol compared to UPF. UPF but not DF intake predicted sodium intake, and both equally predicted added-sugar intake.

**Conclusion:** DF intake predicted energy intakes compared to the NOVA system, which excluded foods with protein and fibre and includes 'empty-calories'. The results suggest that in Australia, DF better predicts poor dietary outcomes and higher BMI than UPF.

**Contact Author:** Amanda Grech - amanda.grech@sydney.edu.au

#### **ID: 232 | Rethinking community-based meals for older people - more than a delivered meal**

**Madelaine Griffith**<sup>1</sup>

<sup>1</sup>Moreland City Council

**Background:** This project responds to feedback from Council's Aged Care clients that the current delivered meals model does not meet their meal needs or preferences. Loneliness and social isolation exacerbated by COVID restrictions are also significant challenges for this cohort. This represents an opportunity to explore the intersection of meals and social connection, and design services to meet both needs.

**Aim:** To test whether greater diversity in meal service settings enhance Council's ability to support the nutrition and social needs of existing clients and encourage uptake of services by eligible others.

**Methods:** Stakeholder engagement, a literature review and an environmental scan informed an action research approach. A series of interventions are being trialled to test the hypothesis, targeting nutritionally vulnerable and socially isolated clients. Evaluation will use quantitative and qualitative data to measure key outcomes including reach, uptake of nutritious meal options, perception of social connectedness and economic viability.

**Results:** Preliminary results indicate meals play an integral role in improving social connection while providing good nutrition. Meals available at one intervention



closely approximate the Meals on Wheels National Meals Guidelines for energy and protein, and clients have enjoyed initial sessions. Intervention reach to the target clients within the cohort will become clearer as the project progresses and different engagement and communication strategies have been incorporated.

**Conclusion:** Results indicate meals can be a conduit for social connection for Aged Care clients in a community setting while supporting good nutrition. Targeted strategies are required to support involvement of vulnerable clients.

**Contact Author:** Madelaine Griffith - madelaine.griffith@gmail.com

### ID: 189 | What happens in the first 6 months after graduating as a Dietitian? Pathways to employment

Alana Heafala<sup>1</sup>, Lana Mitchell<sup>1</sup>, Lauren Williams<sup>1</sup>  
<sup>1</sup>Griffith University

**Background:** Despite the increased number of dietetic graduates in the past decade, there is currently no universal system used to track graduate outcomes for Australian universities with accredited dietetic programs.

**Aim:** To develop and implement a method to explore the experiences of dietetics graduates in transitioning to the workforce and the factors influencing employment outcomes.

**Methods:** A mixed-methods case-study design was used. Graduates of Griffith University Bachelor of Nutrition & Dietetics 2017-2019 (N = 150) were invited to participate. Purpose-developed surveys were administered online prior to graduation (Survey 1) and six-months later (Survey 2) to examine employment outcomes. Telephone interviews were conducted with volunteers from the first cohort using a semi-structured protocol to explore themes arising from survey results. Data from both sources were triangulated and thematically synthesised.

**Results:** Data were provided by 137 graduates at baseline (91% response rate), and 110 (80%) at Survey 2. Six-months after graduating, 76% of respondents seeking employment held a dietitian position but only 47% of those were employed full-time and only 20% in permanent positions. While the majority (61%) of graduating dietitians wanted to work in a hospital compared with 24% in private practice, 6-month employment results were the reverse with 50% in private practice and 31% in hospital positions. Key themes were the importance of networking, willingness to relocate to rural areas, the

need to persevere and the role of support in career development.

**Conclusion:** These findings can be used to guide national data collection initiatives to inform dietetic education and workforce preparation.

**Contact Author:** Alana Heafala - alana.heafala@griffithuni.edu.au

### ID: 181 | Patient and carer experience of nutrition care throughout and beyond treatment for head and neck cancer: a qualitative longitudinal study

Joanne Hiatt<sup>1</sup>, Teresa Brown, Adrienne Young<sup>1,2</sup>,  
Merrilyn Banks<sup>1</sup>, Judith Bauer<sup>2</sup>

<sup>1</sup>Royal Brisbane and Women's Hospital, <sup>2</sup>The University of Queensland

**Background:** Nutrition care plays a critical role in the provision of best practice care to patients receiving treatment for head and neck cancer (HNC). Carers play an important role in supporting patients to maintain nutrition intake.

**Aim:** To explore patient and carer experience of nutrition care from diagnosis of HNC and over a period of 1 year from treatment completion to identify areas for service improvement.

**Methods:** A qualitative study design was used with a heterogeneous sample of 20 patients and 15 carers of patients undergoing curative intent treatment for HNC recruited from outpatient clinics of a tertiary hospital in Brisbane, Australia. Interviews conducted at four time points provided a total of 117 interview datasets that were analysed using reflexive thematic analysis.

**Results:** Patient and carer experiences were reflected in two primary themes and nine subthemes including: (1) the battle to maintain control (health and nutrition beliefs, weight loss rollercoaster, acceptance of feeding tube, gatekeeper role of patient, invisible load of carer); and (2) navigating the road ahead (challenges comprehending information, information accessibility and inclusivity, moving away from hospital environment, peer support).

**Conclusion:** Findings from this study highlight tensions in the care relationships between patients, carers and healthcare professionals, as well as the changing nutritional needs and focus throughout the treatment and recovery journey. This research suggests a need to co-design strategies to improve nutrition care delivery for patients and carers during and after treatment that considers both practical and emotional supports.

**Contact Author:** Joanne Hiatt - joanne.hiatt@health.qld.gov.au

**ID: 176 | Associations between total, fermented and non-fermented dairy intake and depression outcomes in middle-aged Finnish males**

**Meghan Hockey**<sup>1</sup>, Erin Hoare<sup>1</sup>, Mohammadreza Mohebibi<sup>1</sup>, Tommi Tolmunen<sup>2</sup>, Sari Hantunen<sup>3</sup>, Tomi-Pekka Tuomainen<sup>3</sup>, Helen MacPherson<sup>1</sup>, Heidi Staudacher, Felice Jacka<sup>1</sup>, Jyrki Virtanen<sup>3</sup>, Tetyana Rocks<sup>1</sup>, Anu Ruusunen<sup>1</sup>

<sup>1</sup>Deakin University, <sup>2</sup>Department of Adolescent Psychiatry, Kuopio University Hospital, Kuopio, Finland, <sup>3</sup>Institute of Public Health and Clinical Nutrition, University of Eastern Finland, Kuopio, Finland

**Background:** No studies have considered the nutritional differences between fermented and non-fermented dairy products and depression outcomes.

**Aim:** To examine associations between total, fermented and non-fermented dairy intake with the presence of elevated depressive symptoms and the risk of depression diagnosis.

**Methods:** Finnish males (n = 2603, aged 42-60 years) recruited as part of the Kuopio Ischaemic Heart Disease Risk Factor Study were included. For the cross-sectional analysis, multivariable logistic regression was used to examine odds ratios (ORs) and 95% confidence intervals (CIs) for elevated depressive symptoms at baseline. For the prospective analysis, cox proportional hazard regression model was used to estimate hazard ratios (HRs) and their 95% CIs between dairy categories and the risk of depression diagnoses.

**Results:** No association was observed between total dairy intake and depression in either analyses. Fermented dairy intake in the highest tertile was associated with decreased odds of having elevated depressive symptoms (adjusted-OR 0.71, 95% CI 0.52-0.97), whereas higher non-fermented dairy intake was associated with increased odds (adjusted-OR 1.06, 1.01-1.10). Over a mean follow-up time of 24 years, 113 males received a diagnosis of depression. Fermented dairy intake in the highest tertile was associated with a reduced risk of depression diagnosis (adjusted-HR 0.59, 0.36-0.97), and adjustments for baseline depression only slightly attenuated the association. Whereas higher non-fermented dairy intake was associated with 2-fold increase in the risk of depression (adjusted-HR 2.02, 1.20-3.41).

**Conclusion:** Fermentation status may have influenced the association between dairy intake and depression in our cohort. Further prospective studies are required.

**Contact Author:** Meghan Hockey - mhockey@deakin.edu.au

**ID: 72 | Burnout levels among dietitians working in a large Australian metropolitan hospital**

**Greta Hollis**<sup>1</sup>, Karen Atkinson<sup>1</sup>, Jack Bell<sup>2</sup>

<sup>1</sup>The Prince Charles Hospital, <sup>2</sup>Queensland Health

**Background:** Burnout is an occupational phenomenon, characterised by reduced professional efficacy, exhaustion, and feelings of workplace related cynicism. Burnout can negatively impact the service provided to patients, impacting safety and quality of care. Burnout has been typically studied in medical and nursing staff, however, with the increasing complexity of the Dietitian role in the hospital setting, pressures to manage heightened demand for service, there is a clear need to evaluate burnout among dietitians.

**Aim:** To assess the level of burnout among Prince Charles Hospital dietitians.

**Methods:** An anonymous, self-administered survey was provided to dietitians employed at The Prince Charles Hospital during a 2 week period commenced in November 2019. The Maslach Burnout Inventory Tool for Health Services (MBI-HSS) applies three domains; (i) Emotional Exhaustion, (ii) Depersonalisation, and, (iii) Personal Accomplishment to assess the level of burnout.

**Results:** Of the 29 dietitians eligible to participate, 18 (15 female) completed and returned the survey. There were lower mean individual scores compared to the MBI-HSS normative values, for emotional exhaustion (2.3 vs 3;  $P = <.001$ ) and depersonalisation (0.9 vs 2.73;  $P = <.001$ ) There was no difference in personal accomplishment (4.7 vs 4.6;  $P = .913$ ).

**Conclusion:** Low levels of emotional exhaustion and depersonalisation, but not reduced personal accomplishment, were observed. Several strategies to optimise the wellbeing of staff members have been implemented and encouraged in the department. Ongoing evaluation is underway to determine the impact of COVID-19 on burnout levels.

**Contact Author:** Greta Hollis - greta.hollis@health.qld.gov.au

**ID: 102 | Validation of eating disorder screening questionnaires in adolescents and adults with overweight and obesity**

**Eve House**<sup>1,2</sup>, Wee Yee Ong<sup>1</sup>, Haozhen Li<sup>1</sup>, Natalie Lister<sup>1,2</sup>, Hiba Jebeile<sup>1,2</sup>

<sup>1</sup>The University of Sydney, <sup>2</sup>The Children's Hospital at Westmead

**Background:** Individuals with obesity are at increased risk of developing eating disorders. Having appropriate and validated tools to identify at-risk individuals is essential.

**Aim:** To examine the validity of self-report questionnaires for identifying eating disorder risk in adults and adolescents with overweight/obesity.

**Methods:** A systematic search of five databases to September 2020 was conducted to identify validation studies of eating disorder screening questionnaires against a diagnostic interview in adults and adolescents with overweight/obesity.

**Results:** Twenty-seven papers examining 18 different screening questionnaires were included. Most studies validated questionnaires for adults ( $n = 22$ ) and screened for binge eating disorder/behaviours ( $n = 22$ ). The Eating Disorder Examination Questionnaire (sensitivity = 0.16-0.87, specificity = 0.62-1.0) and Questionnaire on Eating and Weight Patterns (sensitivity = 0.07-0.88, specificity = 0.63-0.93) were the most commonly validated questionnaires ( $n = 6$  each). Questionnaires designed specifically for people living with overweight and obesity generally had higher diagnostic accuracy (sensitivity and specificity > 0.75) but were only validated in single studies. Five studies of four different questionnaires were conducted in adolescents, with the Children's Brief Binge Eating Questionnaire having the highest diagnostic accuracy in this age group (sensitivity = 1.0, specificity = 0.93).

**Conclusion:** With the inconsistency of current evidence regarding the diagnostic accuracy of eating disorder screening questionnaires, it is not possible to identify an optimal tool for screening individuals with overweight/obesity. Given the promising results for tools designed specifically for this population, future research should focus on the identification of specific eating disorder risk factors and targeted tools to identify risk in adolescents and adults with overweight/obesity.

**Contact Author:** Eve House - evetheresa.house@health.nsw.gov.au

### ID: 138 | Using effective nutritional screening and referral processes for adults undergoing peritoneal dialysis

Sophie Howes<sup>1</sup>, Soraya Cunningham<sup>2</sup>  
<sup>1</sup>Princess Alexandra Hospital, <sup>2</sup>Gen Physio

**Background:** Patients receiving peritoneal dialysis (PD) are at heightened risk of malnutrition. Best practise guidelines recommend patients be assessed by a dietitian on commencement of PD and routinely every 3 to 6 months. Despite these recommendations, data indicates many patients do not receive timely nutrition care.

**Aim:** To observe current practice and explore staff and patient perceptions around current nutritional screening processes and dietetic care for patients undergoing PD at the Princess Alexandra Hospital (PAH).

**Methods:** A 12-month retrospective audit of completion rates of the Appetite and Dietary Assessment Tool (ADAT) and dietetic referral processes was undertaken at a Peritoneal Dialysis Unit (PDU) at a tertiary facility. Additionally, patients and nursing staff were invited to complete a survey on their perceptions and satisfaction with the current dietetic service provided.

**Results:** Malnutrition screening using the ADAT was completed 22% of the time ( $n = 54/241$  records audited) with dietitian referrals sent on two occasions. 100% of nursing staff surveyed ( $n = 9$ ) agreed having a nutritional screening tool is important. Of 28 patients surveyed 89% ( $n = 25$ ) were happy with the dietetic service provided in PDU, however 25% ( $n = 7$ ) felt they were seen when it wasn't needed.

**Conclusion:** The ADAT is not regularly used to screen for malnutrition despite nursing staff recognising the importance of nutritional screening. Majority of PD patients are happy with dietetic care in PDU, however, a proportion perceived over servicing at times. Investigation of alternative screening processes may be required to better meet the needs of our PD population and staff.

**Contact Author:** Sophie Howes - sophie-howes@hotmail.com

### ID: 82 | CAPITOOL: A protocol for evaluating community-level obesity prevention capacity

Roger Hughes<sup>1</sup>, Andrew Hills<sup>1</sup>, Kiran Ahuja<sup>1</sup>, Kira Paterson<sup>1</sup>, Nuala Byrne<sup>1</sup>  
<sup>1</sup>University of Tasmania

**Background:** Building capacity for community-based obesity prevention remains one of the outstanding challenges of public health nutrition practice. Methods and frameworks to assess and evaluate obesity prevention capacity (OPC) and capacity building efforts remains elusive, impeding effective practice. This challenge is being addressed in the CAPITOL project situated in North-West Tasmania.

**Aim:** To develop and implement a protocol for assessing and evaluating obesity prevention capacity at community level.

**Methods:** OPC assessment has involved a sequence of investigations in three North-West Tasmanian communities (sentinal sites). Data collection methods have included key community stakeholder consultations, health service and workforce mapping, obesinogenic

environment auditing (including physical activity infrastructure and food outlets, price and availability) and social network analysis. These data have been critiqued using a literature informed conceptual framework for OPC via a sensemaking process involving key community stakeholders using a modified nominal group technique.

**Results:** The OPC assessment protocol has identified pockets of existing OPC existing capacity in each sentinel site and highlighted capacity gaps in capacity domains including intelligence, workforce, partnerships and resourcing. The process has proactively engaged community leaders in capacity assessment, provided a conceptual focus for a difficult to measure component of obesity prevention effort.

**Conclusion:** This protocol has enabled the description and quantification of baseline OPC in each sentinel site, which will help prioritise OPC building strategies and enable later OPC evaluation. This protocol will be of interest to practitioners working in public health nutrition practice.

**Contact Author:** Roger Hughes - roger.hughes@utas.edu.au

### ID: 32 | Survey of omega-3 & omega-6 fatty acid biomarker profiles of 2019 Australian & New Zealand dietitians conference attendees

Leodevico Ilag<sup>1</sup>, Carena Gee<sup>2</sup>

<sup>1</sup>Innovation in Life Sciences, <sup>2</sup>Simplot Australia

**Background:** Long-chain polyunsaturated n-3 and n-6 fatty acids have been associated with a range of health conditions including cardiovascular, cognitive, eye and joint health. Available studies have shown that the Omega-3 Index of ANZ populations are below the recommended >8% for cardiovascular health.

**Aim:** To obtain dried blood spot samples and determine relevant n-3 and n-6 fatty acid levels from attendees of Australia and New Zealand as a sample of their respective populations.

**Method:** A total of 362 attendees at the 2019 Dietitians Association of Australia Conference (n = 217) and 2019 Dietitians New Zealand Conference (n = 145) volunteered with consent to have a finger prick test for n-3 and n-6 analysis. The samples were analysed by gas chromatography and the Omega-3 index, Omega 6/3 ratio, AA/EPA ratio were calculated. Statistical calculations were performed with Microsoft Excel using the Student's *t*-test. A *P*-value <.05 was considered statistically significant.

**Results:** The average Omega-3 Index of 7.4 ± 1.4% amongst New Zealand and 7.1 ± 1.5% for Australian conferences' attendees were slightly different from each other

(*P* < .04) but higher than their current national average of 6.0%. The average n-6/n-3 ratio for New Zealand (5.4 ± 1.1) and the Australian subjects (5.6 ± 1.4) were similar (*P* = .14). The average AA/EPA ratio (16.6 ± 10.1) for NZ and Australians' AA/EPA ratio (21.8 ± 17.4) were significantly different (*P* < .001).

**Conclusion:** The fatty acid biomarker levels of the subjects were outside the desirable range, with New Zealand conference attendees having slightly better fatty acid biomarker profiles (Omega-3 Index and AA/EPA ratio).

**Contact Author:** Carena Gee - carena.gee@simplot.com

### ID: 238 | Using telehealth makes it possible to reinvent lifestyle program models and transform patient access

Cindy Jennings<sup>1</sup>, Helen MacLaughlin<sup>1,2</sup>, Lynda Ross<sup>2,3</sup>, Taylor Guthrie<sup>1</sup>, Angela Byrnes<sup>1</sup>, Robin Hay<sup>1</sup>

<sup>1</sup>Royal Brisbane and Women's Hospital, <sup>2</sup>Queensland University of Technology, <sup>3</sup>Griffith University

**Background:** Face-to-face (F) lifestyle programs are inaccessible for patients who are unable to attend in person hospital or community programs due to residence, illness, or mobility limitations.

**Aim:** To evaluate the effectiveness of telehealth (T) compared to F as a delivery mode for providing dietitian-led multidisciplinary Healthy Eating and Lifestyle Behaviour-Change programs to patients who cannot attend hospital appointments.

**Methods:** This prospective cohort study compared outcomes between T, face-to-face group (F-G) and face-to-face individual (F-I) using ANOVA with Bonferroni corrections for multiple comparisons. Outcomes included bodyweight, quality of life (Short Form-12), intuitive eating (Intuitive Eating Scale) and pain (Pain Self Efficacy Questionnaire) at pre and post intervention. The F data used were from a previous cohort.

**Results:** There was a statistically significant improvement in SF-12 mental quality of life in T, but not in F (mean difference T 5.4, F-I -8.9, F-G - 8.2, *P* = .001). There was no difference in the mean change in weight (T - 2.2 kg, F-I -2.1 kg, F-G - 1.5 kg, *P* = .2), intuitive eating (T .38, F-I .2, F-G .25, *P* = .2) or pain score (T 3.4, F-I 7.3, F-G 3.4, *P* = .3) between T and F modes.

**Conclusion:** The results show telehealth is as effective as face-to-face delivery models in providing patient self-management lifestyle intervention programs, particularly in relation to mental health. In the current COVID-19 environment, there are benefits for all patients to access

behaviour change lifestyle programs from the safety of their home.

**Contact Author:** Cindy Jennings - cindiet2018@gmail.com

**ID: 56 | The effect of diet and/or exercise interventions on body composition in cirrhosis: A systematic review**

**Heidi Johnston**<sup>1,2</sup>, Tahnée Takefala<sup>1</sup>, Graeme Macdonald<sup>1</sup>, Ingrid Hickman<sup>2,3</sup>, Hannah Mayr<sup>1,2,3,4</sup>  
<sup>1</sup>Princess Alexandra Hospital, <sup>2</sup>University of Queensland, <sup>3</sup>School of Allied Health, La Trobe University, <sup>4</sup>Faculty of Health Sciences and Medicine, Bond University

**Background:** Sarcopenia is a common complication of cirrhosis which leads to adverse outcomes. It is unclear whether lifestyle interventions can preserve or improve body composition (BC) in this population.

**Aim:** To systematically review existing literature regarding the effect of diet and/or exercise interventions on BC in cirrhosis.

**Methods:** The protocol was registered with PROSPERO. Databases were searched from inception to March 2020: PubMed, EMBASE, Web of Science, CIN-AHL and CENTRAL. Articles were screened to include patients with liver cirrhosis undergoing a diet and/or exercise intervention and reporting on at least one BC measure.

**Results:** 28 studies were included, 15 randomised controlled, 3 non-randomised and 10 uncontrolled trials. Seven were combined diet and exercise interventions, 20 diet and 1 exercise. Nineteen different measures of BC were used across studies, of which triceps skinfold (TSF) was most common (15 dietary interventions and 1 combined). TSF improved in 40% of the dietary interventions, with no change in the combined. The second most reported outcome measure was mid-arm muscle circumference (MAMC) (12 diet and 1 exercise). MAMC increased in 42% of the dietary interventions, with no change in the exercise intervention. Combined studies utilised varying BC measures, of which 43% saw improvements.

**Conclusion:** Dietary and combined interventions had limited effects on TSF and MAMC in cirrhosis, although findings across studies were varied. Drawing a conclusion is limited by heterogeneity and complexity in use of common BC measures in people with cirrhosis. More trials of diet and exercise interventions assessing valid BC outcomes are required.

**Contact Author:** Heidi Johnston - heidi.johnston@health.qld.gov.au

**ID: 161 | Measuring iron bioavailability, may more accurately reflect dietary iron adequacy in long-day care service menus**

**Michaela Johnston**<sup>1</sup>, Therese O'Sullivan<sup>1</sup>, Amanda Devine<sup>1</sup>, Ruth Wallace<sup>1</sup>, Leesa Costello<sup>1</sup>, Ros Sambell<sup>1</sup>  
<sup>1</sup>Edith Cowan University

**Background:** Evidence suggests toddlers are not provided adequate dietary iron in Long Day Care (LDC) centres. However, there is limited evidence investigating bioavailability for said group. LDC provide opportunities for children to consume a proportion of their Recommended Dietary Intake (RDI) for iron.

**Aim:** To investigate the bioavailability of iron provided to children aged 2 to 3 years at LDC.

**Methods:** LDC centres, Perth, Australia, were randomly selected. A two-day weighed food record determined iron provision (haem or non-haem iron). This was compared to RDI and LDC provision guidelines (50% of RDI = 9 mg/day with a 14% absorption factor). Estimated bioavailability considered serving non-haem iron with enhancers including ascorbic acid, animal protein and inhibitors including calcium and phytates using a pre-existing algorithmic calculation.

**Results:** Thirty LDC centres participated. Median iron supplied (2.81 mg/serve/day, IQR 2.19-3.35) was significantly below the RDI of 4.5 mg/serve/day ( $P < .001$ ). Median bioavailable iron was 0.60 mg/day (IQR 0.54-0.81) which demonstrates 24.3% of iron was bioavailable and higher than the 14% recommended (0.63 mg/day  $P < .001$ ). The top three foods contributing to dietary iron were bread, breakfast cereals and beef.

**Conclusion:** Although our results suggest LDC centres are not providing 50% of the RDI for iron, bioavailability calculations suggest toddlers are provided with sufficient iron due to the relatively high bioavailability when served in a meal. Future education strategies should focus on food combinations to further increase the bioavailability of iron in meals currently served.

**Contact Author:** Michaela Johnston - mjjohns1@our.ecu.edu.au

**ID: 237 | Utilising stakeholder organisations to engage vulnerable groups in nutrition content**

**Amber Kelaart**<sup>1</sup>, Michelle Lausen<sup>1</sup>, Holly Beswick<sup>2</sup>, Amy Knight<sup>1</sup>, Montana Griffiths-White<sup>1</sup>, Tess Leeder<sup>1</sup>, Grace Henderson<sup>1</sup>, Lucinda Hancock<sup>1</sup>, Melanie Chisholm<sup>2</sup>  
<sup>1</sup>Nutrition Australia, <sup>2</sup>VicHealth

**Background:** The coronavirus (COVID-19) pandemic exacerbated the challenges faced by vulnerable groups. Organisations across Victoria were pivoting to respond to the pandemic, and food insecurity and healthy eating became a significant priority for many.

**Aim:** The Cook Well Eat Well (CWEW) initiative by Nutrition Australia and VicHealth aimed to enable healthy eating and improved health outcomes for the Victorian population during and post the coronavirus pandemic by providing easy and simple nutrition content to support organisations of vulnerable groups.

**Methods:** A needs assessment was completed with 25 organisations to identify opportunities to support their communities with healthy eating content and resources. Organisations included food relief distribution agencies, charities, food retailers, local councils and Primary Care Partnerships.

**Results:** Organisations requested simple, largely pictorial factsheets; easy to cook, budget friendly recipes using pantry staples, cooking skills and food safety videos and social media content to distribute via their networks. A total of 34 cooking videos, 66 recipes, 16 factsheets and 32 social media posts were developed or aggregated and housed on the CWEW website for organisations to download and cobrand. During the 3-month dissemination phase there were 8833 website users across 9939 sessions, with 543 resources downloaded. As well as social media, there was regional and national media engagement. A qualitative survey indicated positive feedback from engaged organisations.

**Conclusion:** This project demonstrated the value in developing shared healthy eating content and resources that can be used by a range of organisations to improve healthy eating outcomes in their communities.

**Contact Author:** Amber Kelaart - akelaart@nutritionaustralia.org

### **ID: 75 | Can quality improvement strategies effectively enhance primary care dietetic practice? A systematic review and meta-analysis**

**Amy Kirkegaard**<sup>1</sup>, Lauren Ball<sup>1</sup>, Lana Mitchell<sup>1</sup>, Bryce Brickley<sup>1</sup>, Lauren Williams<sup>1</sup>

<sup>1</sup>Griffith University

**Background:** Quality improvement (QI) strategies have been widely applied in health care; however, little is known about their use in primary care dietetics (also known as “private practice”).

**Aim:** To describe and evaluate the effectiveness of QI strategies that aim to improve patient outcomes by enhancing primary care dietetic practice as compared to standard care.

**Methods:** This study employed a systematic review and meta-analysis design. CINAHL Complete, Medline, Embase, Scopus and Business Source Complete databases were searched up to June 2020. Studies were included if they used a randomised controlled trial (RCT) or systematic review of RCT design to evaluate the effect on patient outcomes of a QI intervention for dietetic care. A meta-analysis was conducted only where studies were sufficiently homogeneous.

**Results:** Thirty articles describing 25 RCTs (n = 2743) were included and five studies (n = 511) were eligible for meta-analysis. Most QI interventions included an evidence-based program or education strategies. A positive intervention effect was reported in 56% of studies; however, underreporting of methods was apparent in many studies which may indicate risk of biases. A low grade of evidence supported a positive intervention effect for QI intervention by a dietitian versus standard dietetic practice for glycated haemoglobin (pooled mean difference = -0.39 with 95% CI [-0.70;-0.08], P = 0.01) in n = 511 patients with type-2 diabetes mellitus.

**Conclusion:** Interventions aimed at enhancing quality in primary care dietetic practice are likely to support improvements in patient outcomes. Further research on QI interventions for patient outcomes such as weight and diet quality are required.

**Contact Author:** Amy Kirkegaard - amy.kirkegaard@griffithuni.edu.au

### **ID: 162 | Incorporating whole grains in nutrient profiling algorithms: Implications on measures of food quality**

**Katrina Kissock**<sup>1</sup>, Chris Seal<sup>2</sup>, Gabriel Masset<sup>3</sup>, Heddie Mejborn<sup>4</sup>, Eleanor Beck<sup>1</sup>

<sup>1</sup>University of Wollongong, <sup>2</sup>Newcastle University, UK,

<sup>3</sup>Cereal Partners Worldwide, <sup>4</sup>National Food Institute, Technical University of Denmark

**Background:** Nutrient profiling systems are developed to assist consumers in identifying healthier food choices. However, while dietary guidelines promote whole grains, systems such as the Health Star Rating and Nutri-score do not include whole grain in algorithms used to determine nutritional quality of foods.

**Aim:** To determine if a modified Nutri-score algorithm, including whole grain, would provide an improved measure of food quality.

**Methods:** Whole grain was included into the algorithm using similar scoring to other health promoting nutrients (eg, fibre), with higher scores awarded to foods containing  $\geq 50\%$  whole grain. Modifications were applied to

food composition data from Australia and the United Kingdom (UK). Correlations between overall nutritional score and content of individual components for the original and modified Nutri-score algorithms were compared. Changes in Nutri-score category with the modified algorithm were analysed.

**Results:** Correlations between whole-grain content and food nutritional score were strengthened using the modified algorithm for Australian foods, but less so for UK data. Correlations with other food components were minimally affected. The largest shift in Nutri-score category was from B to A (A = most positive for health).

**Conclusion:** A modification to include whole grain in the Nutri-score algorithm is justified to align with dietary guidelines and may better reflect whole grain as a component to measure nutritional quality of foods. Improved promotion and identification of whole-grain foods may lead to greater whole-grain consumption. Further research is required to test varied modifications and potentially other nutrient profiling systems.

**Contact Author:** Katrina Kissock - krk981@uowmail.edu.au

### ID: 215 | Utilising a knowledge translation framework to determine best practice of Food Sensations for Schools

Amy Large<sup>1</sup>, Claire Celenza<sup>1</sup>, Reearna Morgan<sup>1</sup>, Amrei Bennett<sup>1</sup>, Miranda Chester<sup>1</sup>, Roslyn Giglia<sup>1</sup>

<sup>1</sup>Foodbank WA

**Background:** The Food Sensations for Schools program is a nutrition education and cooking program delivered by university qualified nutritionist and dietitians in eligible schools across metropolitan and regional Western Australia. Funded by the Departments of Education, Health, and Primary Industries and Regional Development, Foodbank Western Australia have delivered the program for 15 years. Providing food literacy in the school curriculum has been shown to strongly influence early healthy food practices that remain into adulthood.

**Aim:** To review a long standing schools based nutrition education program to ensure ongoing best practice.

**Methods:** The Knowledge to Action framework guided the review beginning with the Knowledge Creation component encompassing a scoping and grey literature review, qualitative analysis of reflective professional practice, external program evaluation, and consumer and stakeholder feedback. The steps of the Action Cycle were subsequently followed to identify program areas for review, reinvigoration and reinvention.

**Results:** Multi-session delivery, parent involvement and a whole school approach were just some of the strategies identified in the literature. Team reflection identified reoccurring logistical issues such as communication breakdown, questionable program relevance, school facility and time constraints.

**Conclusion:** Rigorous application of the framework made it possible to transform a longstanding school nutrition education program. This evidence based approach ensured clear passage and progression for team members and funding bodies wedded to the previous delivery paradigm. The resulting knowledge outcomes, and the efficacy of these changes will be determined via future evaluation means and will be presented.

**Contact Author:** Amy Large - amy.large@foodbankwa.org.au

### ID: 226 | Is diagnosing malnutrition using video-based Person-Generated Subjective Global Assessments valid in the home rehabilitation setting?

Cassandra Lawless<sup>1</sup>, Michelle Miller<sup>2</sup>, Jolene Thomas<sup>2</sup>, Owen Kuhr<sup>3</sup>, Alexander Christie<sup>4</sup>

<sup>1</sup>Southern Adelaide Local Health Network-Rehab, Aged Care & Palliative Service, <sup>2</sup>Flinders University, <sup>3</sup>Aged Care, <sup>4</sup>MyAbility Australia

**Background:** There is significant demand for innovation to meet the increasing requirement for nutrition services in rehabilitation. Tele consultations may allow remote diagnosis of malnutrition; however, no valid method to perform the physical examination, a critical component of assessing nutritional status, via video conferencing exists.

**Aim:** To compare the agreement between the in-person and video-based overall physical assessment using the scored Patient Generated Subjective Global Assessment (PG-SGA).

**Methods:** Cross-sectional diagnostic accuracy study. Adults aged  $\geq 18$  years old admitted to the home rehabilitation program at Flinders Medical Centre in Adelaide, South Australia between August-November 2019 and August-October 2020 were eligible. The in-person and video-based PG-SGAs were collected from 71 participants. The physical examination component of the PG-SGA was completed at one in-person encounter and one encounter over a video-call by trained dietitians blinded to the other assessment to determine the agreement between both methods. Statistical analyses performed were percentage agreement, weighted kappa, sensitivity, and specificity were calculated.

**Results:** The overall video-based physical examination rating achieved a percentage agreement of 69.0% against the in-person assessment, with a weighted kappa agreement of 0.658 (95% CI: 0.530-0.786;  $P < .05$ ), sensitivity of 87.9% and specificity of 81.6%.

**Conclusion:** The substantial weighted kappa, good sensitivity and specificity supports the use of the physical assessment in diagnosing malnutrition via video conferencing in the home rehabilitation setting. Future training of dietitians who utilise telehealth could see this method adopted into clinical practise and ultimately better address malnutrition in patients who live remotely or who are unable to attend an outpatient appointment.

**Contact Author:** Cassandra Lawless - cassandra.lawless@sa.gov.au

### ID: 197 | What is possible in medical nutrition education?

Breanna Lepre<sup>1,2</sup>, Eleanor Beck<sup>1</sup>, Kylie Mansfield<sup>1</sup>, Sumantra Ray<sup>2,3,4</sup>

<sup>1</sup>School of Medicine, University of Wollongong, and Illawarra Health & Medical Research Institute, <sup>2</sup>NNEdPro Global Centre for Nutrition and Health, St John's Innovation Centre, <sup>3</sup>School of Biomedical Sciences, Ulster University, <sup>4</sup>School of Humanities and Social Sciences, University of Cambridge

**Background:** Poor diet is a leading cause of death worldwide. Doctors are well-placed to provide dietary advice, yet nutrition remains insufficiently integrated into medical education regardless of location, setting or stage of medical education. Consensus is required on nutrition competencies and regulatory frameworks may be required to enforce these within curriculum or accreditation requirements.

**Aim:** To provide a synthesis of published nutrition competencies, and nutrition in accreditation standards and formal curriculum guidance in medical education.

**Methods:** We developed an integrative review and non-systematic comparative analysis, using formal databases (CINAHL, Medline, Embase, Scopus, Web of Science and Global Health) to identify nutrition competency standards in medicine and Google search engine, WHO Directory of Medical Schools and FAIMER Directory of Organizations that Recognise/Accredit Medical Schools for review of formal accreditation/curriculum standards for nutrition in medical education.

**Results:** Five common themes were identified from published nutrition competency frameworks and include (1) clinical practice, (2) health promotion and disease

prevention, (3) communication, (4) working as a team, and (5) professional practice. Themes such as communication and teamwork are not specific to nutrition and highlight integration of topics across a curriculum. Nutrition remains inadequately represented in important accreditation and curriculum guidance for medical education at all levels internationally.

**Conclusion:** Based on key, cross-cutting themes, there is opportunity for the integration of nutrition into existing curricula. Accreditation standards provide a mandated framework for curricula and therefore the inclusion of nutrition in accreditation frameworks would provide incentive for integration of nutrition competencies into medical education.

**Contact Author:** Breanna Lepre - bl778@uowmail.edu.au

### ID: 71 | Lessons from the pandemic: Exploring how Victorian hospital foodservices have responded to COVID-19

Chloe Ho Yee Leung<sup>1</sup>, Yuen Ching Li<sup>1</sup>, Jorja Collins<sup>2</sup>  
<sup>1</sup>Monash University, <sup>2</sup>Eastern Health

**Background:** Providing meals to hospital patients is essential, even during the COVID-19 pandemic. Victorian hospital foodservices have been profoundly impacted, experiencing the most cases and recurring outbreaks out of all Australian states in 2020.

**Aim:** To explore how Victorian hospital foodservices were affected by and responded to COVID-19.

**Methods:** In this qualitative study, foodservice dietitians and managers from Victorian hospitals were interviewed through zoom using a purpose-designed interview guide exploring three key themes: (1) impacts of COVID-19; (2) how hospital foodservices responded; and (3) the positive and negative aspects experienced. Interviews were audio-transcribed and thematically analysed using a coding framework.

**Results:** Participants ( $n = 9$  hospitals) reported food distribution, meal ordering and waste were majorly impacted, but food supply, menu and budget were generally unaffected. All participants reported contingency plans were developed for maintaining optimal foodservice operations during potential anticipated situations. Segregation of teams and maintaining basic COVID safety measures were also common to keep staff safe. The main positive aspects were perceived to be opportunistic quality improvement and gaining connections with others. The most common challenges were increased workload, time constraints and negative emotions.



**Conclusion:** This novel research captures important lessons learnt from the COVID-19 pandemic, including similarities and differences in experiences and approaches. Contingency plan development, contact-free meal ordering systems, waste management and staff's mental health care appear to be priority areas for hospital foodservice to focus on during COVID-19.

**Contact Author:** Chloe Ho Yee Leung - cleu0022@student.monash.edu

### ID: 48 | CanEAT pathway: Co-design of a cancer nutrition care pathway by patients, carers and health professionals

Jenelle Loeliger<sup>1</sup>, Sarah Dewar<sup>1</sup>, Nicole Kiss<sup>2</sup>, Belinda Steer<sup>1</sup>, Jane Stewart<sup>1</sup>

<sup>1</sup>Peter MacCallum Cancer Centre, <sup>2</sup>Deakin University

**Background:** Multiple evidence-based guidelines exist relating to nutrition and cancer care. However, there is a lack of resources that practically guide the provision of optimal nutrition care.

**Aim:** To co-design a cancer nutrition care pathway to guide consistent and evidence-based nutritional care of patients throughout the cancer care continuum.

**Methods:** This experienced-based co-design study utilised both quantitative and qualitative methods. A survey and focus groups were conducted with patients/carers, in addition to co-design workshops and key stakeholder consultation with patients, carers and multi-disciplinary cancer health professionals (HP).

**Results:** Of 165 patient/carer survey respondents, only 51% (n = 84) had talked to a HP about nutrition at any time during their cancer care, despite most (84%) feeling nutrition was important at one or more time-points. Support received for nutrition care was rated low by patients/carers. Five focus groups were held (n = 20; 16 patients, 2 carers, 2 both patients/carers) and five themes emerged: nutrition information, experiences and need; control over diet and nutrition; importance and value of nutrition; access to support; what optimal nutrition care looks like. Two co-design workshops and a stakeholder consultation period were completed with patients, carers and HP to design a pathway defining optimal cancer nutrition care (The CanEAT pathway).

**Conclusion:** The CanEAT pathway, co-designed by patients, carers and HP, combines evidence-based practice tips and patient/carer needs into a centralised suite of resources, tools and clinical guidance to enable the delivery of high-quality nutrition care. It is freely available to support patients, carers and HP.

**Contact Author:** Jenelle Loeliger - Jenelle.Loeliger@petermac.org

### ID: 183 | Higher consumption of ultra-processed foods is associated with increased likelihood of central nervous system demyelination

Adriana Mannino<sup>1</sup>, Alison Daly<sup>1</sup>, Robyn Lucas<sup>2</sup>, Lucinda Black<sup>1</sup>

<sup>1</sup>Curtin University, <sup>2</sup>Australian National University

**Background:** Consumption of ultra-processed foods (eg, packaged snacks, confectionery, mass-produced breads, breakfast cereals, instant/ready-to-eat meals, margarine, processed meats, pastries) has been linked to adverse health outcomes, including obesity, hypertension and cardiovascular disease. To our knowledge, no studies have tested associations between consumption of ultra-processed foods and risk of multiple sclerosis (MS).

**Aim:** To test associations between consumption of ultra-processed foods and likelihood of a first clinical diagnosis of central nervous system demyelination (FCD), a common precursor to MS.

**Methods:** We used data from the 2003 to 2006 Ausimmune Study, an Australian multicentre, matched, case-control study. Dietary intake data were collected using a food frequency questionnaire: 28 food/beverage items were identified as being ultra-processed according to the NOVA food classification system. After excluding 17 participants with implausible energy intakes (20 000 kJ/day), we tested associations between consumption of ultra-processed foods (energy-adjusted using the residual method) and likelihood of FCD using logistic regression (257 cases, 475 controls), with full propensity score matching for age, sex, study region, education, BMI, years of smoking, history of infectious mononucleosis, dietary misreporting, and serum 25-hydroxyvitamin D concentrations.

**Results:** Higher consumption of ultra-processed foods was significantly associated with increased likelihood of FCD (adjusted odds ratio = 1.08; 95% confidence interval = 1.01, 1.15; *P* = .022), with an 8% increase in likelihood of FCD per one energy-adjusted serving/day.

**Conclusion:** In this Australian population, higher consumption of ultra-processed foods was associated with increased likelihood of FCD, which is in line with findings from studies of ultra-processed foods and various chronic diseases.

**Contact Author:** Adriana Mannino - adriana.mannino@postgrad.curtin.edu.au

**ID: 223 | Food and nutrient intake of Australian primary school children during school hours: A secondary analysis**

Alexandra Manson<sup>1</sup>, Brittany Johnson<sup>1</sup>, Dorota Zarnowiecki<sup>1</sup>, Rebecca Golley<sup>1</sup>

<sup>1</sup>Flinders University

**Background:** School food intake of Australian children is not comprehensively described in literature, with limited contemporary, nationally representative information available. Greater understanding of intake within school creates opportunity for transformation of the school food system, improving children's nutrition and health outcomes.

**Aim:** To describe the dietary intake of 5 to 12 year old children during school hours and its contribution to total daily dietary intake.

**Methods:** This study was a secondary analysis of nationally representative, cross-sectional data from the Australian 2011-12 National Nutrition and Physical Activity Survey. Dietary intake of 795, 5 to 12-year-olds was assessed using validated 24-hour dietary recalls completed on school days. Descriptive analyses were completed to determine energy, nutrients, food groups, food categories and discretionary items consumed during school hours and daily contribution.

**Results:** Children consumed 33% of their daily energy intake during school hours, with 40% of school energy intake from discretionary food and beverages. Most children did not consume vegetables, meat or dairy foods during school hours. Commonly consumed items were discretionary foods (34%), including biscuits, processed meat and packaged snacks, in addition to fruit (17%) and bread (12%).

**Conclusion:** Foods and beverages consumed during school hours provide a considerable contribution to daily energy intake, reinforcing schools as a key health promotion setting. Children are not consuming diets aligned with national recommendations, with school food profiled by high intake of discretionary items. Results consistent with previous Australian evidence support reinvention of the Australian school food system to better align school food consumption with national recommendations.

**Contact Author:** Alexandra Manson - alexandracman@gmail.com

**ID: 70 | Automated meal compliance using deep learning techniques for individualised hospital catering - pilot study**

Jiaxiang Mao<sup>1</sup>, Andrew Slattery<sup>2</sup>, Dat Tran<sup>1</sup>, Wanli Ma<sup>1</sup>, Elisa Martinez-Marroquin<sup>1</sup>, Jane Kellett<sup>1</sup>, Nenad Naumovski<sup>1</sup>

<sup>1</sup>University of Canberra, <sup>2</sup>Canberra Health Services

**Background:** Hospitals kitchens are exposed to labour intensive demands ensuring the highest food service quality control on a daily basis. Furthermore, provision of specialised diets is of utmost importance for meeting the nutritional requirements of vulnerable patients. Currently, meal compliance operations rely on human checking which can be ineffective and prone to errors. Recently, use of deep learning techniques (DLT) has demonstrated successful real-life applications in image recognition in other industries and there is a potential to apply these technologies in the hospital kitchens.

**Aim:** To explore the use of DLT on the applicability of meal recognition to improve meal compliance in an acute care hospital facility.

**Method:** In the hospital kitchen, two cameras facing the meal tray for minimal visual overlap were positioned. A prototype system with a DLT model was implemented based on the transfer learning method built in the closed circuit system. We compared two different DLT models, Visual Geometry Group (VGG) and Resnet-18.

**Results:** The collected image datasets were from meal trays consisting of a meal (2 choices) and meal components (16 component choices). For each component category, 150 digital images were collected divided into training (n = 90 images), validation (n = 30) and testing (n = 30). The training and validation results of both VGG and Resnet-18 models provided recognition accuracy of higher than 90% (VGG 98.82%).

**Conclusion:** The use of a DLT image recognition system has a potential to offer a safer food service quality control in the hospital setting.

**Contact Author:** Andrew Slattery - andrew.slattery@act.gov.au

**ID: 53 | Whole grains for cardiovascular disease? A systematic review and meta-analysis of randomised controlled trials**

Skye Marshall<sup>1,2</sup>, Peter Petocz<sup>3</sup>, Emily Duve<sup>1</sup>, Kylie Abbott<sup>1</sup>, Tim Cassettari<sup>1</sup>, Michelle Blumfield<sup>1</sup>, Flavia Fayet-Moore<sup>1</sup>

<sup>1</sup>Nutrition Research Australia, <sup>2</sup>Bond University,

<sup>3</sup>Macquarie University

**Background:** Observational data have established a link between the consumption of whole grains and reduced risk of cardiovascular disease (CVD); however, there is a need to review interventional research.

**Aim:** In adults with or without chronic disease and/or associated risk factors, to determine if interventions providing whole grain or whole pseudo-grain for dietary consumption improve CVD-related outcomes compared with refined grain or placebo.

**Methods:** A systematic review and meta-analysis of published randomised controlled trials was conducted (PROSPERO: CRD42019129403). Five electronic databases were searched for studies of 12-weeks (or 2-weeks for inflammatory outcomes) duration until February 21, 2020. Data were extracted for 14 types of CVD risk factors from published reports. Risk of bias was assessed using the Cochrane Risk of Bias tool. GRADE was used to determine the confidence in the pooled effects and to inform a clinical recommendation.

**Results:** Twenty-five randomised controlled trials were included and 22 were meta-analysed. Interventions ranged from 2- to 16-weeks; most samples were healthy ( $n = 13$  studies) and used mixed whole grains ( $n = 11$  studies). Only subgroup analyses found significant effects, including those for total cholesterol (SMD:0.54 [95%CI:-0.95,-0.12]), LDL-cholesterol (SMD:  $-0.57$ [95% CI:  $-0.84, -0.31$ ]), triglycerides (SMD:  $-0.22$ [95%CI:  $-0.44, -0.01$ ]), HbA1c (SMD:  $-0.33$ [95%CI:  $-0.61, -0.04$ ]), and CRP (SMD:  $-0.22$ [95%CI:  $-0.44, -0.00$ ]).

**Conclusion:** For adults with or without CVD risk factors, consuming whole grain as opposed to refined grain may improve some cardiovascular risk factors. Further interventional research in those with existing CVD or CVD risk factors is needed to better understand the preventative and treatment potential of whole grain and whole pseudo-grain.

**Contact Author:** Skye Marshall - skye@nraus.com

### ID: 170 | Meta-analysis reveals higher intake of fruit and vegetables is protective against depression in older adults

Annabel Matison<sup>1</sup>, Simone Reppermund<sup>1</sup>, Vicki Flood<sup>2</sup>, Karen Mather<sup>1</sup>

<sup>1</sup>University of New South Wales, <sup>2</sup>University of Sydney

**Background:** Depression is the third largest global burden of disease. Compared with younger adults, depression in older adults has a greater impact on physical performance and cognition and may impact a person's ability to live independently. In older adults, depression is associated with increased suicide and non-suicide mortality. There is growing evidence of an association between diet and depression, though there is a lack of public awareness that dietary changes may reduce the risk of depression.

**Aim:** To summarise the longitudinal observational evidence between fruit and vegetable intake and the incidence of depression in community-dwelling adults aged 45 years and older.

**Methods:** Cohort studies published up to December 2020 were identified that investigated the association

between baseline intake of fruit and/or vegetables, and incidence of depression in population-based community-dwelling adults aged 45+ years. Two independent reviewers performed study selection, data extraction and quality assessment. Combined odds ratios and 95% confidence intervals were calculated. Random-effects models were used to account for potential heterogeneity between study design.

**Results:** Four studies with a total of 176 659 participants were identified. Higher fruit and vegetable intakes were associated with a reduced risk of incident depression (fruit: OR 0.85; 95% CI 0.81-0.90;  $P < .001$ ; vegetables: OR 0.91; 95% CI 0.87-0.96;  $P < .001$ ).

**Conclusion:** Results suggest an association between higher consumption of fruit and vegetables and decreased incidence of depression in older adults. However, due to the limited number of studies, more high-quality cohort studies are needed to confirm these associations.

**Contact Author:** Annabel Matison - a.matison@unsw.edu.au

### ID: 73 | Development and implementation of a pictorial hospital food menu

Claire Matthews<sup>1</sup>, Nadine Lawson<sup>1</sup>, Sarah Coletti<sup>1</sup>

<sup>1</sup>Cabrini Health

**Background:** People have a distinctly better memory for pictures than for words, known as the picture superiority effect. Current practice at a private hospital involves verbal meal ordering using an electronic menu management system without pictures. Electronic self-ordering which includes pictures increases energy and protein intake, decreases plate wastage and improves patient meal experience. However, it is unclear if these same outcomes are achieved using a hard copy pictorial menu.

**Aim:** To investigate the use of a pictorial menu to improve patient and staff experience; and determine if this tool improves ease of meal ordering, patient energy and protein intake, and decreases plate wastage.

**Methods:** An observational point prevalence study was undertaken in October 2019 and April 2020 on two wards. Meal intake data were collected using a visual six point scale. Patients and staff were surveyed. Excel and SPSS were used for statistical analysis.

**Results:** Introduction of the pictorial menu increased patients' confidence in knowledge of their order by 13.7% ( $P = .021$ ). The appearance of meals were more likely to meet patients' expectations ( $P < .001$ ), and patients were more likely to feel they received assistance they required ( $P = .002$ ). There was no significant change in patients' energy and protein intake. Staff identified pictorial

menus as helpful to patients, time efficient, and improved patients' knowledge of the appearance of meals but were heavy and hard to hold.

**Conclusion:** Pictorial menus improved patient experience and had mostly positive staff feedback but did not alter patient's nutritional intake or decrease plate wastage.

**Contact Author:** Claire Matthews - clairematthews@cabrini.com.au

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### ID: 22 | Assertive feeding for patients at-risk of refeeding syndrome appears safe: Time to challenge current guidelines?

Kylie Matthews-Rensch<sup>1</sup>, Adrienne Young<sup>2,3</sup>, Candice Drysdale

<sup>1</sup>Royal Brisbane Women's Hospital, <sup>2</sup>Royal Brisbane & Women's Hospital, <sup>3</sup>University of Queensland

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**Background:** Refeeding syndrome (RFS) is a condition that can occur during the early stages of refeeding in severely malnourished or starved individuals. International guidelines recommend a conservative approach for managing RFS risk (hypocaloric nutrition for 4-7 days), however emerging evidence supports more assertive feeding.

**Aim:** To describe nutritional management and RFS-related adverse outcomes in patients at risk of RFS receiving care after implementing assertive guidelines.

**Methods:** This was a retrospective cohort study of inpatients identified as at risk of RFS during admission between November 2018 and April 2019. Data were collected from medical records regarding nutritional management (provision of nutrition, electrolyte and vitamin replacement) and outcomes (incidence of RFS, serum electrolyte decreases, hypo/hyperglycaemia, oedema, organ function disturbance). Data were analysed descriptively; relationships between serum electrolyte decreases and nutritional management were explored using Fisher's exact tests.

**Results:** Of the 70 patients at risk of RFS (58 ± 17 years, 56%M, 94% malnourished), the majority received recommended supplementation prior to the commencement of nutrition (thiamine: 76%; micronutrients: 72%-100%; multivitamin: 61%), and assertive initial nutritional management (79%; more cautious: 13%; more liberalised: 8%). There were no cases of RFS. Four participants experienced RFS-related adverse outcomes (severe electrolyte decreases: n = 2, hypo/hyperglycaemia: n = 2); however, there was no differences in adverse outcomes based on nutritional management (initial feeding rate:  $P = .912$ ; time to goal feeding rate:  $P = .688$ ).

**Conclusion:** Assertive refeeding in the management of RFS risk appears to be safe. Larger multi-site studies examining assertive refeeding and prevalence of adverse outcomes will be useful in updating international guidelines.

**Contact Author:** Kylie Matthews-Rensch - kylie.l.matthews@gmail.com

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### ID: 19 | Do multidisciplinary teams recommend the Mediterranean diet for coronary heart disease and type 2 diabetes?

Hannah Mayr<sup>1,2,3</sup>, Jaimon Kelly<sup>3,5</sup>, Anthony Russell<sup>3,4</sup>, Graeme Macdonald<sup>3</sup>, Ingrid Hickman<sup>3</sup>

<sup>1</sup>La Trobe University, <sup>2</sup>Bond University, <sup>3</sup>Princess Alexandra Hospital, <sup>4</sup>University of Queensland, <sup>5</sup>Griffith University

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**Background:** Practice guidelines for coronary heart disease (CHD) and type 2 diabetes (T2D) recommend the Mediterranean dietary pattern (MDP) to improve cardiometabolic risk and prevent disease progression and complications. It is unknown to what extent the MDP is recommended in routine care.

**Aim:** To explore multidisciplinary clinicians' perspectives on whether the MDP is recommended in routine care for CHD and T2D and barriers and enablers to its implementation.

**Methods:** Semi-structured individual interviews were conducted with 57 clinicians (21 nurses, 19 doctors, 13 dietitians and 4 physiotherapists) routinely managing relevant patients in a metropolitan Australian health service. Interviews were audio-recorded, transcribed and analysed using thematic content analysis.

**Results:** Four overarching themes were identified: 'current dietary practices' (all clinicians perceived a role in dietary care but prioritisation and perceived scope varied with the MDP not routinely recommended and a legacy of single nutrient-based education); 'clinician-centred barriers' (limited MDP knowledge and practice skills, and variable understanding and belief in evidence which were related to lack of education and training and personal interest/experience); 'organisational culture and resources influence dietary care' (MDP not embedded in service culture or resources, and limited dietary knowledge exchange across multidisciplinary teams); and 'perceived patient-centred barriers' (socioeconomic challenges in a multicultural setting and a lack of belief in patient capabilities).

**Conclusion:** The MDP was not routinely recommended to CHD or T2D patients and dietary education varied between conditions and across multidisciplinary clinicians. Identified clinician-centred, organisational and patient-centred influences on practice should be

addressed for improved translation of MDP evidence into practice.

**Contact Author:** Hannah Mayr - Hannah.Mayr@health.qld.gov.au

### ID: 135 | Can diet quality indices measure change in diet quality in dietary intervention studies?

Erynn McAuley<sup>1</sup>, Lynda Ross<sup>1,2</sup>, Mary Hannan-Jones<sup>1</sup>, Neil King<sup>1</sup>, Helen MacLaughlin<sup>1</sup>

<sup>1</sup>Queensland University of Technology, <sup>2</sup>Griffith University

Diet quality indices (DQIs) were developed primarily for nutritional epidemiology and validated to measure diet quality cross-sectionally. However, the use of these indices to measure changes in diet quality in clinical and public health interventions has become increasingly common.

**Aim:** To determine the validity of DQIs to measure change in diet quality in intervention trials. Medline, CINAHL, EMBASE and CENTRAL databases were systematically searched between January 1994 and June 2020. Eligible studies were randomised controlled trials designed to improve diet quality in adults using validated a priori DQIs. Data were extracted by an independent reviewer then reviewed by the research team. Study quality was assessed using the Risk of Bias 2 tool.

**Results:** A total of 28 studies, using 13 different DQIs were included. Thirteen studies, using 10 different DQIs reported significant changes in score. Interventions that detected large changes in DQI scores implemented dietary patterns that were largely different to control groups or reflected the specific DQI. Due to high heterogeneity between studies, there was an inability to determine whether changes in scores reflected meaningful changes in diet quality. No included studies validated DQIs for responsiveness. DQIs are not yet validated to measure change, however, they can detect significant changes in diet quality in interventions.

**Conclusion:** This review has highlighted the importance of carefully selecting DQIs that reflect dietary patterns implemented in interventions and the need to validate indices for responsiveness to determine whether a significant change in score reflects a meaningful change in diet quality.

**Contact Author:** Erynn McAuley - erynn.m94@hotmail.com

### ID: 136 | Optimising the role of Nutrition Allied Health Assistants (AHAs)

Joanne McKinstry<sup>1</sup>, Karen McDougall<sup>1</sup>, Rubina Raja<sup>1</sup>, Emily Reibel<sup>1</sup>, Jennifer Sequeira<sup>1</sup>, Raisa Shaikh<sup>1</sup>

<sup>1</sup>Monash Health

**Background:** Nutrition AHAs working across four bed-based services at Monash Health (acute and sub-acute inpatient settings) perform a variety of approved tasks, assisting Dietitians to deliver safe, timely and effective nutrition care. Anecdotal staff feedback suggested a need to diversify the Nutrition AHA tasks to help meet the increasing demands of the nutrition and dietetic workforce, and to optimise the Nutrition AHA role. A Nutrition AHA working party with dietetic and AHA representation was established to evaluate the feedback and diversify the Nutrition AHA tasks within their scope of practice.

**Aim:** To optimise and expand the Nutrition AHA role within their scope of practice to support the delivery of an accessible, efficient and sustainable nutrition and dietetic service to meet patients' needs.

**Methods:** The Victorian Assistant Workforce Model (VAWM) survey was sent electronically to Monash Health Nutrition AHAs and dietitians to identify additional tasks the AHA could perform.

**Results:** New tasks that could be delegated to Nutrition AHAs were suggested by 62.5% (n = 20) of dietitians and 33% (n = 1) of Nutrition AHAs. The organisation's AHA Credentialing and Scope of Practice document was updated, and AHA learning packages developed for: patient education on bariatric surgery and liver disease; checking eating disorder patient menus; collecting nutritional biochemistry data and nutrition risk screening nursing education.

**Conclusion:** The AHA Working Party will monitor the implementation of the new tasks, evaluate after 12 months and seek to further expand the diversity of tasks Nutrition AHAs can complete within scope of practice.

**Contact Author:** Joanne McKinstry - jo.mckinstry@monashhealth.org.

### ID: 31 | Dietitian assistant management pathway: An innovative approach to nutritional management of aged care patients

Cameron McLean<sup>1</sup>, Natasha Turner<sup>1</sup>, Helen Dragicevich<sup>1</sup>, Terry Stefanidis<sup>1</sup>, Chona Lauzon<sup>1</sup>, Fauzia Haque<sup>1</sup>, Claire Campbell<sup>2</sup>

<sup>1</sup>St George Hospital, <sup>2</sup>University of Wollongong

**Background:** Older adults at risk of malnutrition admitted to hospital may not be identified through routine referral pathways. The dietitian assistant workforce is underutilised in the management of nutrition risk screening and simple nutritional interventions.

**Aim:** To implement and evaluate a structured dietitian assistant lead approach to nutrition risk screening and

management of patients admitted to a Sydney Metropolitan Hospital aged care ward.

**Methods:** A dietitian assistant nutritional management pathway was trialled in October 2020 for 4 weeks. Patients were delegated to the dietitian assistant to screen and implement nutritional strategies. Descriptive characteristics, nutrition impact symptoms, change in menu ordering practices and oral intake were collected and descriptively analysed. Staff were surveyed pre and post implementation.

**Results:** During the trial period 22 patients were seen on 40 occasions. The sample was mostly male (55%) with an average length of stay 16.1 days (range, 4.8-43.5). 7 patients reported weight loss prior to hospital presentation. 15 patients would not have been identified through existing screening practices. Between initial contact and first review a clinically meaningful 100 kcal and 5 g protein intake increase was observed at a main meal. The number of patients ordering under targeted daily thresholds reduced from 55% to 10%. Staff reported the project contributed to meaningful patient care.

**Conclusion:** A dietitian assistant management pathway contributes to greater scope of practice for the dietitian assistant and improved job satisfaction. Closer monitoring of oral intake and food preferences has contributed to meaningful improvements in oral intake.

**Contact Author:** Cameron McLean - Cameron. McLean@health.nsw.gov.au

#### **ID: 147 | Standardisation of dietitian assistant competencies across South Eastern Local Health District**

**Cameron McLean**<sup>1</sup>, Margaret Holyday<sup>2</sup>, Brielle Gosch<sup>3</sup>, Jessica Young<sup>3</sup>, Claire Douglas<sup>2</sup>, Karina Haaksma<sup>4</sup>, Jennifer Olding<sup>4</sup>, Natasha Turner<sup>1</sup>, Morgan Brown<sup>1</sup>

<sup>1</sup>St George Hospital, <sup>2</sup>SESLHD, <sup>3</sup>The Sutherland Hospital, <sup>4</sup>Prince of Wales Hospital

**Aim:** To develop a standardised suite of Dietitian Assistant tasks and the associated competency framework for use across multiple hospitals in one health district.

**Method:** A working party was formed with dietitian representatives from three tertiary teaching hospitals. A needs assessment identified tasks that required competency development. Competencies were developed aligning to the Allied Health Assistant Framework: stroke screening, completion of the malnutrition screening tool (MST), oral nutrition support review, home enteral nutrition (HEN) registration, dietary intake review and meal time observation. Both the dietitian and

Dietitian Assistant experience was evaluated and descriptively analysed.

**Results:** The competency framework was able to be implemented across all three hospitals, supporting development of the Dietitian Assistants' direct patient nutrition care roles at all sites. Facilitators were identified as clearly defined timelines, roles and understandable assessment forms. Barriers emerged including fluctuating staffing levels, excessive email communications and receptiveness of the Dietitian Assistant. Contributions to patient care were identified as increased patient interaction, greater monitoring of food preferences and intake and ability to re-prioritise workloads. Future considerations were conflicting including a more simplified approach to communication or additional in-services for further information.

**Conclusion:** the standardisation of competence of Dietitian Assistants across a health district will allow greater expansion of clinical roles, staff flexibility across hospital sites and impact on patient care. Further consideration should be made around how individual competencies can contribute to protocol based care in high risk nutritional populations.

**Contact Author:** Cameron McLean, Cameron. McLean@health.nsw.gov.au

#### **ID: 168 | Influence of patient characteristics on clinicians' decision to involve dietitians in eating disorder treatment**

**Caitlin McMaster**<sup>1</sup>, Tracey Wade<sup>2</sup>, Janet Franklin<sup>3</sup>, Glenn Waller<sup>4</sup>, Susan Hart<sup>5</sup>

<sup>1</sup>University of Sydney, <sup>2</sup>Flinders University, <sup>3</sup>Metabolism & Obesity Service, Royal Prince Alfred Hospital, <sup>4</sup>University of Sheffield, <sup>5</sup>St Vincent's Hospital

**Background:** Clinical practice guidelines recommend a multi-disciplinary team approach in the assessment and treatment of eating disorders, including medical, psychological and dietetic input. However, recent research has shown discrepancies between eating disorder dietitians, clinicians, consumers and carers with regards to when dietetic treatment should be incorporated into patient care.

**Aim:** To understand what clinical characteristics non-dietetic clinicians use to determine whether a dietitian should be involved in a patient's treatment for an eating disorder.

**Methods:** Clinicians were recruited through four Australian eating disorder organisations to complete an online survey using eight clinical case vignettes to assess

their likelihood of involving or consulting with a dietitian based on different clinical presentations.

**Results:** Fifty-seven clinicians completed the survey, comprised predominantly of clinical psychologists (n = 22, 39%). Clinicians were most likely to endorse involvement of a dietitian if a patient presentation with anorexia nervosa or a medical co-morbidity, and if the patient was losing weight or had not made progress with psychological therapy.

**Conclusion:** Results underline the importance of dietitians: (1) highlighting the potential of malnutrition, a maintaining factor for eating disorders, regardless of a patient's eating disorder diagnosis or weight status; and (2) educating clinicians about their role in assisting patients address disordered eating patterns and behaviours as part of recovery from an eating disorder.

**Contact Author:** Caitlin McMaster - caitlin.mcmaster@sydney.edu.au

#### ID: 49 | International diversification of dietetics accreditation standards and their role in transforming outcome-based education

Sarah Meiklejohn<sup>1</sup>, Lucie D'Udekem D'Acoz<sup>1</sup>, Claire Palermo<sup>1</sup>

<sup>1</sup>Monash University

**Background:** Accreditation systems for dietetics internationally have been designed to ensure the higher education sector graduates professionals with the skills necessary to meet health and nutrition needs. There is currently limited evidence to suggest accreditation actually improves the quality of dietetics graduates, health care delivery or outcomes.

**Aim:** To explore the extent to which accreditation supports the development of work-ready dietetic graduates and to compare dietetic accreditation systems internationally.

**Methods:** Using an interpretive policy analysis approach accreditation standards and process documentation related to dietetics programs were collated from Australia, Canada, New Zealand, United Kingdom and United States of America. Key accreditation officers and administrators were interviewed using purposive and snowball sampling (n = 6). Data were analysed using framework analysis.

**Results:** Students' and graduates' interests were prioritised by accreditation processes in relation to their needs to meet professional standards as well as eligibility for registration in their respective countries. There was an overwhelming focus of accreditation on graduate competency and safety upon entry to practice.

Interprofessional education and cultural capability were areas of focus in countries other than Australia. Tensions related to ongoing focus on placement hours appeared to be at odds with the current trend towards outcomes-based education and competency-based assessment. Curriculum innovation appeared to be overshadowed by concerns related to historical contexts of curriculum delivery and placement arrangements.

**Conclusion:** The study findings suggest the need to transform aspects of dietetics accreditation in Australia to ensure the development of a capable and diverse dietetic workforce of the future.

**Contact Author:** Sarah Meiklejohn - sarah.meiklejohn@monash.edu.

#### ID: 83 | Enhancing graduate employability through targeting ePortfolios to employer expectations: A scoping review

Lana Mitchell<sup>1</sup>, Mari Somerville<sup>1</sup>, Chris Campbell<sup>1</sup>, Elizabeth Cardell<sup>1</sup>, Lauren Williams<sup>1</sup>

<sup>1</sup>Griffith University

**Background:** Electronic portfolios (ePortfolios) are increasingly being used in graduate preparation to showcase employability. However, the body of evidence on employers' views and use of ePortfolios has not been synthesised.

**Aim:** To systematically evaluate the views of employers, industry representatives and university educators regarding use of ePortfolios in recruiting graduates, including recommended ePortfolio content.

**Methods:** Six databases were searched using key terms analogous with 'ePortfolio' and 'employment' to identify original research on employer views and utilisation of ePortfolios published since 2000. Studies revealed by the search were screened in duplicate, and the full texts of 140 articles reviewed. Included studies were synthesised to reveal common themes.

**Results:** The 17 included studies represented a range of industries and most were conducted in the USA (n = 10). Commonly addressed content related to the views and use of ePortfolios included: current and expected use; advantages and disadvantages; and recommended content. Employee awareness of ePortfolios was low, as was their use within recruitment. Perceived advantages of ePortfolios in recruitment included showcasing key skills/work; ability to comprehensively assess and differentiate between candidates quickly; and accessibility. The main disadvantages were time taken to review, excessive information and establishing authenticity. Recommended ePortfolio content includes samples of

professional work, reflections, videos and photos. Inclusion of typical resume content, work experience, skills, transcripts, certificates, references, supervisor evaluations were important, as was a clear and concise structure.

**Conclusion:** While the use of ePortfolios in graduate recruitment is low, targeting ePortfolio content to employer preferences could enhance the acceptability of ePortfolios in recruitment.

**Contact Author:** Lana Mitchell - lana.mitchell@griffith.edu.au

### **ID: 225 | What makes a dietitian? Skills, behaviours and attitudes for successful development**

**Zara Nance**<sup>1</sup>, Helen Truby<sup>1,2</sup>, Clare Dix<sup>1</sup>, Cheryl Collins<sup>1</sup>, Olivia Wright<sup>1</sup>, Judy Bauer<sup>1,3</sup>

<sup>1</sup>University of Queensland, <sup>2</sup>Monash University, <sup>3</sup>Dietitians Australia

**Background:** The purpose of this project was to explore what the ideal attributes a student dietitian should embody. This information can be used to direct and transform, how future curricula is delivered, experienced and assessed to enhance the development of the desired skills, attitudes and behaviours.

**Aim:** To explore the desired skills, attitudes and behaviours for dietetic students in order to align curricula with expectations of multiple stakeholders.

**Methods:** The methodology employed was guided by a transformational education framework incorporating elements of design-thinking called Vision Backcasting. This 360° user centred design approach ensured that all key stakeholders, including students, were incorporated. Interactive focus groups, either face to face or on-line using digital discussion boards, were utilised to gather data. Qualitative thematic analysis was conducted to identify the desired skills, attitudes and behaviours of student dietitians.

**Results:** Identified attribute expectations were remarkably consistent between stakeholders. Key desired skills identified were strong communication and teamwork, underpinned by excellent knowledge of evidence-based practice. Professionalism, confidence to problem solve, critical thinking and resilience were desired key attitudes and behaviours.

**Conclusion:** Dietetic student skills, attitudes and behaviours develop through interactions within academic and practicum environments. These Vision Backcasting outcomes will feed forward into a purposively delivered curricula designed to shape and reward the desired skills, attitudes and behaviours. Engagement between academics and practicum supervisors will be important to create the range of experiences required to develop the

desired attributes of professional resilient dietitians capable of leading change.

**Contact Author:** Zara Nance - z.nance@uq.edu.au

### **ID: 248 | Serving up healthy, high-quality and local food in public hospitals and aged care services**

**Kelly Neville**<sup>1</sup>, Veronica Graham<sup>1</sup>, Rita Alvaro<sup>1</sup>, Brian Dennehy<sup>2</sup>, Bianca Kavanagh<sup>3</sup>

<sup>1</sup>Department of Health, <sup>2</sup>Victorian Registration and Qualification Authority, <sup>3</sup>Deakin University

**Background:** The Victorian Government has committed to ensuring “that food available in our public hospitals and aged care services is fresh, healthy and, where possible, locally sourced.” As a first step, a comprehensive review was undertaken in 2019 to 20.

**Aim:** To investigate food and drink provision; determine food procurement arrangements; provide recommendations on revising food standards for hospitals and aged care services.

**Methods:** Online surveys to all 327 hospitals and aged care service sites; 26 site visits; consumer surveys; and qualitative interviews with 49 aged care residents.

**Results:** Overall, the review found that Victorian public hospitals and aged care services provide nutritious food for their patients and residents. Services enthusiastically engaged with the review (with 241 (73%) of sites responding to the surveys), and are actively looking for ways to improve variety, diversity and the proportion of locally sourced food. Whilst around 80% reported compliance with current food standards, there was some variability in food service models, the quality of foods provided, and patients' and residents' experience of meals. There was strong support for a revision of Victorian Government food standards to include an increased focus on food quality, cultural diversity and the needs of aged care residents.

**Conclusion:** Review findings will help identify improvements that can be made with regards to food standards and food service systems, ensuring patient and resident consultation, and the ongoing training and skills of the workforce.

**Contact Author:** Veronica Graham - veronica.graham@dhhs.vic.gov.au

### **ID: 200 | Obesity prevention policies/practices within early childhood education and care settings: A narrative scoping review**

**Hanh Nguyen**<sup>1</sup>, Isabella Davis<sup>1</sup>, Robyn Delbridge<sup>1</sup>, Jacklyn Jackson<sup>2</sup>, Serene Yoong<sup>1</sup>

<sup>1</sup>Swinburne University of Technology, <sup>2</sup>Hunter New England Health



**Background:** Obesity Prevention policies and practices within the Early Childhood Education and Care (ECEC) setting are recommended by leading health agencies internationally. A synthesis of these policies and guidelines could highlight opportunities to strengthen future guideline development and implementation strategies.

**Aim:** To synthesise and appraise recommended ECEC based obesity prevention (healthy dietary behaviour and physical activity) policies and practices within high income countries.

**Methods:** An online systematic search of the following sources was conducted: three electronic databases; four guideline databases; grey literature sources; and the reference lists of relevant publications. Included guidelines targeted: (i) children aged one to 6 years within ECEC settings; (ii) high income countries; and (iii) addressed healthy eating (HE), physical activity (PA) and sedentary behaviour (SB). Included policies and guidelines were appraised using the AGREE II tool, and qualitatively synthesised into broad policy/practice themes.

**Results:** 40 guidelines from seven high income countries were included. Guidelines targeted HE (n = 32), PA (n = 30), and SB (n = 16). HE guidelines consistently provided recommendations based on national nutrition guidelines. PA guidelines frequently recommended ECEC services incorporate at least 180 minutes of PA/day. The AGREE II tool found five guidelines scored highly and were recommended without modification and one guideline scored poorly and was not recommended in an ECEC setting.

**Conclusion:** ECEC focused obesity prevention guidelines are consistent in their recommendation, and well aligned with evidence. Clearer reporting of guideline development processes are required to produce more effective policies that have a greater impact on obesity prevention in ECEC settings.

**Contact Author:** Hanh Nguyen - hanh.mt.nguyen@hotmail.com

### ID: 38 | The delivery of patient centred dietetic care in subacute rehabilitation units: A scoping review

Hannah Olufson<sup>1,2</sup>, Adrienne Young<sup>1,2</sup>, Theresa Green<sup>1,2</sup>

<sup>1</sup>University of Queensland, <sup>2</sup>Metro North Hospital & Health Service

**Background:** Patient centred care positively influences individual and organisational outcomes. It is important that dietitians working in rehabilitation units are supported to deliver patient centred care, as effective rehabilitation is a collaborative and patient centred process. In practice however, there is limited guidance on

what patient centred nutrition care in rehabilitation units looks like.

**Aim:** To explore the available evidence and relevant characteristics/concepts regarding the delivery of patient centred dietetic care in subacute rehabilitation units, as well as how patient centred care was defined or measured in these studies.

**Methods:** PubMed, MEDLINE, CINAHL, EMBASE and SCOPUS were searched for published literature. Searches for grey and unpublished literature were also completed, with 675 studies identified overall. Identified studies were then assessed using a 2-step process for eligibility based on pre-defined inclusion criteria.

**Results:** Six studies were included in the review. Documentation was lacking regarding conceptualisation and operationalisation of patient centred nutrition care, with only one study providing indicators for patient centred dietetic services. Commonly cited elements of patient centred care were limited to phrases such as 'individualised care', 'tailored advice', 'follow-up', and 'team collaboration'. Contemporary definitions show that delivery of care which is truly patient centred is far more comprehensive than individualising interventions or organising ongoing services.

**Conclusion:** Thus, this scoping review highlighted a significant gap in the literature regarding the delivery of patient centred dietetic care in subacute rehabilitation units. This raises the question: is the delivery of nutrition care in the subacute rehabilitation sector genuinely patient centred?

**Contact Author:** Hannah Olufson - Hannah.Olufson@health.qld.gov.au

### ID: 15 | The quality of care provided to patients with hospital acquired malnutrition within metro south hospitals

Michelle Palmer<sup>1</sup>, Jan Hill<sup>1</sup>, Breanne Hosking<sup>1</sup>, Fiona Naumann<sup>1</sup>, Rachel Stoney<sup>2</sup>, Lynda Ross<sup>3</sup>, Talia Woodward<sup>1</sup>, Christine Josephson<sup>1</sup>

<sup>1</sup>Queensland Health, <sup>2</sup>Bayside Health Service, Metro South Health, <sup>3</sup>Queensland University of Technology and Griffith University

**Background:** Little is known about the hospital care provided to patients who develop Hospital Acquired Malnutrition (HAM).

**Aim:** To describe the quality of nutritional care provided to patients who developed HAM within Metro South Health (MSH).

**Methods:** A retrospective audit of medical records was conducted of adults with length of stay (LOS) >14 days

in MSH hospitals from July 2015 to January 2019 who were clinically assessed to have HAM. Demographic, anthropometric, admission, nutritional and clinical data were sourced. Descriptive statistics were conducted, with chi-squared and t-tests used to compare data for patients with LOS < or  $\geq$  40 days.

**Results:** Eligible HAM patients ( $n = 208$ ) were 64% male, LOS 51(15-354) days, BMI  $26.8 \pm 6.2$  kg/m<sup>2</sup>, and aged  $65 \pm 17$  years. First malnutrition screening was completed median (range) 1(0-59) days after admission, with weekly screening conducted on 38% of patients. Time to initial dietitian assessment was 9(0-87) days, and 27(2-173) days until malnutrition diagnosis. One third (37%) were weighed within 24 hours of weight being requested by the dietitian and 51% had fluid retention that may have masked weight loss. One third ( $n = 31/112$ , 28%) of those not receiving enteral or parenteral nutrition had it considered by the dietitian, despite 91% of all patients consuming <80% requirements for >2 weeks and only 40% consuming adequate intake prior to discharge. Those with LOS  $\geq 40$  days (59%,  $n = 124/208$ ) took more time (~20 days) to be diagnosed with malnutrition and lost ~4 kg more weight during admission ( $P < .001$ ).

**Conclusion:** The results show that opportunities exist to optimise nutritional care to facilitate the prevention of HAM.

**Contact Author:** Michelle Palmer - michelle.palmer@health.qld.gov.au

### ID: 246 | Dietary fibre intake is not significantly associated with total stool mass in elite athletes

Ella Parnell Harrison<sup>1</sup>, Brittany More<sup>1</sup>, Andrea Vermeersch<sup>1</sup>, Bronwen Charlessen<sup>1</sup>

<sup>1</sup>Edith Cowan University

**Background:** Gut health is important for optimal performance in athletes. Total stool mass (TSM) is emerging as a potential marker of gut health, however little is known about the link between TSM and the usual diet in athletes.

**Aim:** To determine if dietary fibre (total, soluble and insoluble) in a usual diet was associated with TSM in elite rowers during a preparatory training phase.

**Methods:** Elite West Australian rowers participated in this cross-sectional study. Fibre was assessed using a verified 3 day dietary record in conjunction with a customised fibre database. TSM was determined using two overlapping days of 24 hour stool collection.

**Results:** In 21 rowers (mean age of  $19.5 \pm 0.20$  years, 52% male, 48% female), TSM was correlated with total

( $r = -0.23$ ), insoluble ( $r = -0.19$ ) and soluble fibre ( $r = -0.23$ ) in g/mJ/day (all  $P > .05$ ). Independently of gender and age, the association between TSM (g/day) and total, insoluble or soluble fibre (g/mJ/day) and average TSM were not significant (all  $P > .05$ ). Females on average consumed more total and insoluble fibre (g/mJ/day) when compared to the male group (2.64 vs 2.17, 1.98 vs 1.48, respectively, all  $P > .05$ ).

**Conclusion:** Dietary fibre (total, soluble and insoluble) in a usual diet was not significantly associated with TSM in elite West Australian rowers. Future research in a larger cohort is recommended to assess dietary fibre intake with TSM along with other markers of gut health.

**Contact Author:** Ella Parnell Harrison - eparnell@our.ecu.edu.au

### ID: 94 | Baseline audit of beverages available and factors influencing beverage supply within a complex university setting

Shirley Phan<sup>1</sup>, Jane Dancey<sup>1</sup>

<sup>1</sup>Monash University

**Background:** Obesity in young adults aged 18-24 years old is an increasing health problem in Australia. With 61.3% of young adults consuming sugar-sweetened beverages at least once per week, university food environments have the ability to influence the food and drink choices of young adults.

**Aim:** To collect baseline data on drink supply and the factors influencing drinks availability within a university setting.

**Methods:** Student researchers visited 41 retail outlets across four Monash University campuses and recorded the drink facings displayed within the drink fridges. Using the Victorian Government's Healthy Choices Guidelines, the drinks were classified Green, Amber and Red using a traffic light system. A short interview was also conducted with store managers to identify factors influencing drink availability on-campus.

**Results:** 62.5% of drinks ( $n = 2928$ ) analysed were classified as Red, 18.2% as Amber and 19.3% as Green, with 404 different drink types being offered across the university. Sugar-sweetened soft drinks (25.4%) were the most common type of beverage available, followed by still and sparkling waters (18.5%), artificially sweetened drinks (12.6%), sugar-sweetened teas and flavoured waters (12.1%), juices (10.1%), kombuchas and kefirs (6.1%), alcohol (4.9%), sugar-sweetened energy drinks (4.6%) and others (5.7%). Retailers stated that drink availability on-campus was influenced by popularity and profitability, and by promotional deals from suppliers. Soft drinks, water and juices are also commonly offered as part of meal deals.

**Conclusion:** University food environments are dominated by energy-dense, nutrient-poor sugar-sweetened beverages and further action is required to decrease the availability of sugar-sweetened beverages on-campus.

**Contact Author:** Shirley Phan - shirley.yee@monash.edu

### ID: 45 | Why we need to transform the presentation of dietitians on the Internet

Judi Porter<sup>1</sup>, Jorja Collins<sup>2</sup>

<sup>1</sup>Deakin University, <sup>2</sup>Eastern Health

**Background:** The public perception of dietitians including the recruitment of the future workforce is influenced by how the profession is presented on the Internet.

**Aim:** To describe how dietitians are portrayed on the Internet, and compare these findings with demographics of members of international dietetic associations.

**Methods:** This was a cross-sectional study where image searches for 'dietitian' in Google incognito were analysed in duplicate. The first 250 images were studied on two occasions, 17 months apart. A coding framework was applied to classify the personal characteristics of dietitians, other people in the image, and the setting. Comparisons were made to membership data of dietitians in Australia, the UK and the USA.

**Results:** Of the 339 images of dietitians, 88% were female, 72% Caucasian, 63% aged 26-39 years. Most (78%) images showed dietitians alone, 78% were pictured with food, in settings that could not be determined (76%). Although the age/gender profiles of images aligned with demographics of the international workforce, there was an absence of dietitians in authentic roles and work settings.

**Conclusion:** Internet images of dietitians do not fully illustrate the profession. A narrow and polished image of dietitians may foster a stereotype of a dietitian to prospective students and clients that does not align with reality. Increased visibility and representation through the use of authentic images are needed that show the breadth of work roles and diversity of dietitians' age, gender, cultural background and size.

**Contact Author:** Judi Porter - judi.porter@deakin.edu.au

### ID: 130 | How much behaviour change science is there in dietetics programs in Australia and New Zealand?

Roshan Rigby<sup>1</sup>, Lana Mitchell<sup>1</sup>, Kyra Hamilton<sup>1</sup>, Lauren Ball<sup>1</sup>, Lauren Williams<sup>1</sup>

<sup>1</sup>Griffith University

**Background:** Practising dietitians report the need for enhanced knowledge and skills in behaviour change science. While this is an area of required entry-level competence, the extent to which behaviour change science is covered within existing dietetics curricula is unknown.

**Aim:** To explore the provision of behaviour change science education within accredited dietetics curricula in Australian and New Zealand.

**Methods:** A mixed-methods study design was used. Part one involved a five-step document review of curricula for each accredited university. Courses (subjects) delivering behaviour change science content were identified and described. Data were analysed categorically using Bloom's Taxonomy. In part two, academics from each university were invited to participate in a semi-structured interview to expand on the document review data of current behaviour change science curricula, and to explore possible improvements.

**Results:** Document review of the 18 accredited University programs identified 29 courses with behaviour change science content. Content was delivered at different time points in degrees, at differing Blooms Taxonomy levels, from 'remember' to 'apply'. Fifteen universities volunteered to participate in interviews. Participants described behaviour change science to be essential and preferred it to be scaffolded throughout the degree rather than limited to one course. Time constraints and a curriculum that was already 'content-heavy' were described by participants as barriers to expanding behaviour change science content.

**Conclusion:** All programs delivered behaviour change science content, but the amount varied. This study revealed barriers to expanding content that would need to be overcome to strengthen this key area of practice.

**Contact Author:** Roshan Rigby - roshan.rigby@griffithuni.edu.au

### ID: 231 | Following a very low calorie diet: The experience of Australian participants

Anna Roesler<sup>1</sup>, Skye Marshall<sup>2,3</sup>, Hania Rahimi-Ardabili<sup>2</sup>, Emily Duve<sup>2</sup>, Kylie Abbott<sup>2</sup>, Michelle Blumfield<sup>2</sup>, Tim Cassettari<sup>2</sup>, Flavia Fayet-Moore<sup>2</sup>

<sup>1</sup>Innovative Dietitian, <sup>2</sup>Nutrition Research Australia, <sup>3</sup>Bond University

**Background:** Consistent evidence supports the efficacy of very low calorie diets (VLCDs) for weight loss and favourable changes in biochemistry. In Australia, VLCD programs are self-initiated and healthcare professional guidance is not mandated. There is a lack of qualitative research to understand the experiences of Australian users.

**Aim:** To describe the experiences and factors associated with the perceived outcomes of using a VLCD program for  $\geq 4$  weeks in Australian adults.

**Methods:** A mixed method study using semi-structured interviews and cross-sectional survey data. Adults were eligible if they were consuming at least one VLCD product daily for  $\geq 4$  weeks or had ceased consumption within 4 weeks. Interviews were thematically analysed.

**Results:** Weight loss ( $19 \pm 18$  kg) and duration of VLCD product use ( $5 \pm 5$  months) of the 31 participants ( $44 \pm 11$  years, 97% female, 48% BMI  $>30$  kg/m<sup>2</sup>) were strongly correlated ( $r = 0.73$ ,  $P < .001$ ). Participant experiences were influenced by previous weight loss attempts and VLCD program commencement was due to a convergence of internal motivators. Early health-related outcomes were a reinforcing stimulus for continued use. Although participants developed new health behaviours, they felt dependent on the VLCD program for long term weight management. Individual, program structure and environment-related facilitators and barriers were identified. Health care professionals were minimally engaged as peer and online support was preferred.

**Conclusion:** A model of care to support facilitators and overcome barriers would mean more meaningful engagement of health care professionals to ultimately improve the experience, safety, adherence of VLCD program and product users in Australia.

**Contact Author:** Anna Roesler - aroesler@theinnovativedietitian.com.au

### ID: 128 | Lessons on public health advocacy from an evaluation of the Victorian Salt Reduction Partnership

**Emalie Rosewarne**<sup>1</sup>, Wai-Kwan Chislett<sup>1</sup>, Michael Moore<sup>1</sup>, Alexandra Jones<sup>1</sup>, Kathy Trieu<sup>1</sup>, Jacqui Webster<sup>1</sup>  
<sup>1</sup>The George Institute for Global Health

**Background:** Public health advocacy strategies facilitate policy change by bringing key health issues to the forefront of public and political discourse, influencing decision-makers and public opinion, and increasing policy demand. The Victorian Salt Reduction Partnership (VSRP) implemented a four-year intervention in response to inadequate government action to improve population diets in Australia.

**Aim:** To evaluate the success of the VSRP's advocacy and policy strengthening strategy.

**Methods:** Documentation of VSRP activities and outputs were collected. Semi-structured interviews were conducted with 14 VSRP and seven food industry stakeholders. The "Kotter-Plus" 10-step public health

advocacy evaluation framework was used to guide data extraction, analysis and synthesis.

**Results:** A sense of urgency for salt reduction was generated and enabled the creation of a coalition with diverse skills and expertise, which facilitated the development of an innovative and collaborative advocacy action plan. However, the impact of the program was reduced by ineffective communication with decision-makers, who were not provided with a clear incentive for policy change. Program outputs were achieved; though, these did not translate to achieving broader strategic goals during a limited-term intervention in an unsympathetic political climate.

**Conclusion:** The "Kotter-Plus" framework was a useful tool for evaluating the VSRP advocacy and policy strengthening strategy. The framework enabled the identification of key strengths, including the creation of a diverse guiding coalition, and areas for improvement in future similar interventions, such as effective communication within partnerships and to decision-makers, to better influence policy and improve public health impact.

**Contact Author:** Emalie Rosewarne - erosewarne@georgeinstitute.org.au

### ID: 160 | Impact of a wellbeing program aimed at increasing resilience during dietetic student placements

**Lynda Ross**<sup>1,2</sup>, Patrick Lynch<sup>2</sup>, Lana Mitchell<sup>2</sup>, Emily Williams<sup>2</sup>, Jonathan Munro<sup>2</sup>, Lauren Williams<sup>2</sup>  
<sup>1</sup>Queensland University of Technology, <sup>2</sup>Griffith University

**Background:** In response to growing evidence that student dietitians find professional placements stressful, a wellbeing program delivered by a professional counsellor was introduced to the third-year dietetics curriculum at Griffith University.

**Aim:** To evaluate whether the wellbeing program was valued by students and whether it resulted in resilience and stress management practices on placement.

**Methods:** Students in year 3 in 2018 ( $n = 48$ ) and 2019 ( $n = 46$ ) completed surveys at end of year 4 placements (2019 and 2020, respectively). Items asked how frequently students found placements stressful/challenging (rarely, occasionally, frequently, almost always) and explored the most challenging aspects (free text). Value of the resilience program and knowledge and application of related practices were rated on a 7-point Likert scale (1 = not valuable/low; 7 = valuable/high). Open-ended items asked about stress management strategies on placement and how the university can better prepare students for placement.

**Results:** Students rated placements as frequently (36%), almost always (14%) stressful/challenging. The most challenging aspects were: constant evaluation (56%), finances (40%), being away from usual supports (38%) and personality conflicts (35%). The majority (89%) rated the resilience program as moderately-highly valuable. Qualitative data revealed students managed stress on placement by prioritising and making time for self-care. They wanted more practical examples and specific training in how to respond to negative supervisor feedback.

**Conclusion:** Students reported placements to be stressful and valued a wellbeing program to enhance resilience prior to placement. The program increased their ability to apply stress management practices on placement, but they remained unprepared for negative feedback.

**Contact Author:** Lynda Ross - l20.ross@qut.edu.au

#### **ID: 127 | Using Facebook and text messages to improve calcium intake in young adults: A six-week RCT**

**Anika Rouf**, Monica Nour<sup>1</sup>, Margaret Allman-Farinelli<sup>2</sup>  
<sup>1</sup>NSW Health, <sup>2</sup>University of Sydney

**Background:** Calcium is an essential nutrient and intakes remain low among Australian young adults. Given this population group are high users of social media, there is potential to use these platforms to encourage positive dietary behaviours.

**Aim:** To promote calcium intake among young adults using social media and applying the Behaviour Change Wheel, through the CAN-DO (Calcium Nutrition-Dietary Opportunities) program.

**Methods:** Young adults (18-25 years) were randomised into three groups which included Facebook, Facebook plus text and control group. The content was aimed at improving knowledge, cooking skills and motivation to enable calcium-rich food consumption. The outcomes were change in calcium-rich food intake, knowledge, motivation, habit and self-efficacy measured at baseline and end of intervention. Intention-to-treat analysis with multiple imputations for missing values were used in multivariate regression models to assess changes over time between groups.

**Results:** 211 participants (30.3% males) were recruited (mean age 21.4; SD 2.1). No change in milk intake (OR 1.51 95% CI 0.61-3.75 Facebook; OR 1.77 95% CI 0.74-4.24 Facebook plus text messages;  $P = .4076$ ) nor calcium-rich food was detected ( $P = .5686$ ). Those in the Facebook plus text message group had an improvement in knowledge ( $P = .0004$ ) compared to the other groups. The program received positive qualitative feedback from

participants and more participants in the Facebook plus text arm viewed the posts and 'liked' them ( $P = 0.000$ ).

**Conclusion:** The CAN-DO study was found to be acceptable among young adults. However, further research is needed to optimise the program to motivate participants to consume more calcium-rich foods.

**Contact Author:** Anika Rouf - anika.rouf@sydney.edu.au

#### **ID: 166 | Novel insights into transforming food service at Austin Health to improve patient mealtime experience**

**Melissa Rubin**<sup>1</sup>, Natasha Smith<sup>1</sup>, Mansha Digpaal-Ghose<sup>1</sup>, Gabriella Inguanti<sup>1</sup>, Isabella Davis<sup>1</sup>, Bestin Bijo<sup>2</sup>, Jordana Flude<sup>1</sup>, Katherine Desneves<sup>3</sup>, Samantha King<sup>3</sup>, Annie-Claude Lassemillante<sup>1</sup>

<sup>1</sup>Swinburne University of Technology, <sup>2</sup>Swinburne University, <sup>3</sup>Austin Health

**Background:** Mitigation of in-hospital malnutrition is limited by a lack of valid assessment tools which measure broad aspects of patient mealtime experience. A novel assessment tool was developed and implemented at Austin Health.

**Aim:** To measure patient experience and satisfaction during mealtime service using a tool designed from a previous qualitative study with patients and staff involved in provision of food.

**Methods:** A cross-sectional study was conducted in November 2020. Ninety-eight participants completed the 'Patient Mealtime Experience' survey, which included 18 questions, covering mealtime aspects of food quality, staff interactions and assistance, environment and the food ordering system.

**Results:** Patients were sometimes, rarely or never satisfied with the overall quality (51%), visual appearance (48%) or taste and flavour of meals (53%). Over 80% patients reported staff were always or often friendly and respectful, whilst over 85% patients found the ordering system to be suitable and meal service times appropriate. Frequent mealtime interruptions by staff were reported by 15% patients. Thirty-one percent of patients regularly experienced positioning difficulties with their meal trays. Five statistically significant associations were observed. Overall enjoyment of meals was associated with visual appearance of meals ( $X^2 = 60.5$ ,  $P < .001$ ), variety in meal choices ( $X^2 = 26.6$ ,  $P = .003$ ), how patients felt on the day of the survey ( $X^2 = 23.9$ ,  $P = .008$ ), and the Austin Health site ( $X^2 = 10.1$ ,  $P = .04$ ).

**Conclusion:** These results present opportunity for simple recommendations for short-term changes. On-demand dining could be considered as a future initiative

to transform foodservice to improve patient mealtime experience and satisfaction.

**Contact Author:** Melissa Rubin - 102284000@student.swin.edu.au

### **ID: 145 | Stakeholder views on added sugar policy: An Australian case study**

**Cherie Russell**<sup>1</sup>, Mark Lawrence<sup>1</sup>, Phillip Baker<sup>1</sup>  
<sup>1</sup>Deakin University

**Background:** Over-consumption of added sugar is a significant public health nutrition issue. A suite of policy actions has been proposed to reduce added sugar consumption, targeting behaviour change, the food environment, or the food system. To date, most policies have promoted the reformulation of packaged foods. This may involve a reduction in sugar counterbalanced by the addition of non-nutritive sweeteners: substances with non-caloric properties which impart sweetness. Due to vested interests, values and beliefs, stakeholders have disparate views regarding which policy actions are preferable to improve diets, including reducing added sugar consumption.

**Aim:** To examine Australia's current policy actions to reduce added sugar consumption, determine which factors influence policy choice, and explore what stakeholders perceive as the benefits/harms of different policy actions.

**Methods:** Semi-structured interviews were conducted. Purposive and snowball sampling was used to recruit participants from various stakeholder groups, including food regulators, food industry representatives, public health organisations, government employees, and academics.

**Results:** Twenty-two interviews were conducted. Current and proposed policy actions identified by stakeholders were generally nutrient specific, with limited understanding of the potential consequences of reformulation with NNS. Policies did not always distinguish between added and total sugar. Suggested impacts on policy in Australia included industry influence, fragmentation of stakeholders, political will, consumer salience and the limitations of food regulation.

**Conclusion:** Australian nutrition policy is reductionist in nature, which has the potential for unintended consequences. Instead, policy that considers the broader food system, including dietary patterns and sustainability should be prioritised.

**Contact Author:** Cherie Russell - caru@deakin.edu.au

### **ID: 78 | Reduced systolic blood pressure following high polyphenol extra virgin olive oil consumption: The OLIVAUS study**

**Katerina Sarapis**<sup>1</sup>, Colleen Thomas<sup>1</sup>, Johanna Hoskin<sup>1</sup>, Elena George<sup>2</sup>, Wolfgang Marx<sup>2</sup>, Hannah Mayr<sup>1,3,4</sup>, Gregory Kennedy<sup>5</sup>, Andrew Pipingas<sup>5</sup>, Jane Willcox<sup>1</sup>, Luke Prendergast<sup>1</sup>, Catherine Itsiopoulos<sup>6</sup>, George Moschonis<sup>1</sup>  
<sup>1</sup>La Trobe University, <sup>2</sup>Deakin University, <sup>3</sup>Bond University, <sup>4</sup>Princess Alexandra Hospital, <sup>5</sup>Swinburne University of Technology, <sup>6</sup>RMIT University

**Background:** Extra virgin olive oil (EVOO) is suggested to be cardioprotective partly due to its higher phenolic content (PC). However, evidence on EVOO polyphenol effects on blood pressure (BP) and arterial stiffness is limited.

**Aim:** To examine the effect of extra-virgin high polyphenol olive oil (HPOO) vs low polyphenol olive oil (LPOO) on BP and arterial stiffness in healthy Australian adults participating in the OLIVAUS study, a double-blind randomised, controlled cross-over trial investigating the impact of EVOO polyphenols on cardiovascular risk markers.

**Methods:** Fifty participants (age: 39.0 ± 14.0 years, 66% females) were randomly allocated to consume either 60 mL of HPOO (320 mg/kg PC) or LPOO (86 mg/kg PC) daily for 3 weeks, in conjunction with their habitual diet. Following a two-week wash out period, they then crossed-over to consume the alternate olive oil. BP (peripheral and central) and arterial stiffness (pulse wave velocity) were measured at each baseline and follow up intervention phase.

**Results:** Peripheral and central systolic BP (SBP) significantly decreased by 2.5 mmHg (95% C.I: -4.7 to -0.3) and 2.7 mmHg (95% C.I: -4.7 to -0.6), respectively only after HPOO consumption. No changes were observed in diastolic BP (DBP) and arterial stiffness.

**Conclusion:** The reductions observed in SBP after the daily consumption of extra virgin HPOO provides evidence for a widely accessible dietary intervention to reduce cardiovascular disease risk in the Australian sociocultural context. Longer intervention periods and/or higher doses of EVOO polyphenols may be required to elucidate their potential effect on other cardiovascular risk markers such as DBP and arterial stiffness.

**Contact Author:** Katerina Sarapis - k.sarapis@latrobe.edu.au

### ID: 59 | Filling nutrition gaps in a sustainable plant-based diet - edible insects reinvent what's possible

Nicole Senior<sup>1</sup>, Jane Marriott<sup>2</sup>

<sup>1</sup>Professional Nutrition Services, <sup>2</sup>University of Sydney

**Background:** Plant based diets are popular for environmental and health reasons. Care is required in vegetarian diets to ensure adequate intakes of nutrients typically obtained from animal foods. Nutritional gaps have been filled by fortification or nutritional supplements. Insects are an emerging food source with cricket powder (ground, roasted crickets) now available in supermarkets.

**Aim:** To identify nutrients of concern in vegetarian diets and profile the nutrients present in cricket powder.

**Methods:** Research at-risk nutrients in vegetarian diets. Source nutrient data for cricket powder and establish the nutrient contribution per serve of at-risk nutrients, including percent Recommended Daily Intake (%RDI) specified by Food Standards Australia and New Zealand (FSANZ) for labelling purposes ('regulatory RDI').

**Results:** Vitamin B<sub>12</sub>, iron, zinc, calcium, vitamin D and long chain omega-3 fats are nutrients of concern in vegetarian diets. Available local product data show per 20 g serve cricket powder contains 1.7 mg iron (14% adult regulatory RDI\*), 4.4 mg zinc (36% RDI\*), 44 mg calcium (5% RDI\*), 6.2ug vitamin B<sub>12</sub> (300% RDI\*) and 120 mg long chain omega-3 fats (LC n-3 fats) (75% AI, men; 130% AI, women). Vitamin D content is uncertain but suggested at 1ug (10% RDI\*) and increases upon UV light exposure.

**Conclusion:** A 20 g serve of cricket powder is a source of iron, a good source of LCn-3 fats and an excellent source of zinc and vitamin B<sub>12</sub>. Cricket powder is a nutritious and sustainable food that could help diversify and fill nutritional gaps in a vegetarian diet, both in home cooking and commercial products.

**Contact Author:** Nicole Senior - nicoleseior@ozemail.com.au

### ID: 244 | Cost and affordability of a nutritionally adequate six-food elimination diet for people with eosinophilic oesophagitis

Katherine Sheedy<sup>1</sup>, Nishaat Patel, Judi Porter<sup>2</sup>, Hannah Silva<sup>3</sup>

<sup>1</sup>Austin Health, <sup>2</sup>Deakin University, <sup>3</sup>Eastern Health

**Background:** Eosinophilic oesophagitis (EoE) is a chronic immune mediated condition. The six-food elimination diet (6FED), where dairy, wheat, eggs, soy/legumes, nuts and seafood are removed then systematically challenged, is recommended as first-line dietary

treatment, targeting the disease cause. Barriers to compliance of specialty diets include cost.

**Aim:** To explore cost and affordability of 6FED healthy food baskets (6HFB) for three social demographics with EoE in Australia.

**Methods:** Victorian Healthy Food Baskets were updated to reflect current demographic profiles and nutritional guidelines. 6HFBs were developed for three family types chosen to reflect the demographics of eastern Melbourne and the EoE population: nuclear family, couple without children, single male. Baskets were priced online over six locations with costs as a proportion of the Equivalised Household Disposable Income and weekly earnings for welfare recipients calculated. Affordability was defined as 25%.

**Results:** A 6HFB was significantly more expensive than a healthy food basket (HFB) for all family types (family 9.77%, couple 18.00%, single 36.48%,  $P = .004$ ). The 6HFB was considered unaffordable for the nuclear family (32.6%) and single male receiving welfare (32.06%). The 6HFB may contribute to food stress for the couple on welfare (27.33%) and nuclear family not on welfare (28.11%), as would the HFB for the nuclear family on both incomes (25.67%, welfare 29.78%).

**Conclusion:** Social demographics should be considered when choosing a strategy for EoE treatment. Newer approaches to elimination diets include four-food and step-up diets, however further work is needed to evaluate their cost implications.

**Contact Author:** Hannah Silva - hannah.silva@easternhealth.org.au

### ID: 58 | Microbiota and body composition during the period of complementary feeding

Paula Smith-Brown<sup>1</sup>

<sup>1</sup>Microba

**Background:** Research on the role of early diet on the development of the microbiome has mainly focused on the impact of breastfeeding with little attention paid to the influence of complementary feeding.

**Aim:** To explore the association between food group intake (quantitative food frequency questionnaire), faecal microbiota profile (16S rRNA gene sequencing) and body composition (bioelectrical impedance analysis and dual energy X-ray absorptiometry) during the period of complementary feeding (6-24 months of age).

**Results:** During this critical period of microbiota development, age was the strongest predictor of microbiota composition with network analysis revealing a cluster of 14 genera positively associated with age. A separate smaller

cluster contained genera associated with FMI (fat mass index) and dairy serve intake, with Bifidobacterium at the hub. Milk intake (cow's milk and infant formula) was strongly correlated with LMI (lean mass index) ( $\rho = 0.69$ ,  $P < .001$ ). Antibiotic exposure within the first month of life was associated with an increase in mean BMI z score of 1.17 ( $P = .001$ ,  $t$ -test) and body fat of 3.49% ( $P = .001$ ,  $t$ -test) in this cohort of 50 infants aged 6 to 24 months of age.

**Conclusion:** This small study provides a suggestion that dairy intake interacts with both microbiota and body composition in early life. However, antibiotic use in the first month of life had the most striking influence on body composition.

**Contact Author:** Paula Smith-Brown - paula.smith-brown@microba.com.

### ID: 120 | Dietary fibres as an adjunct to a low FODMAP diet in patients with irritable bowel syndrome

Daniel So<sup>1</sup>, CK Yao<sup>1,2</sup>, Peter Gibson<sup>1</sup>, Jane Muir<sup>1</sup>  
<sup>1</sup>Monash University, <sup>2</sup>Alfred Health

**Background:** Patients with irritable bowel syndrome (IBS) respond to a low FODMAP diet (LFD), but there is a tendency for dietary fibre intake to be reduced. The effects of fibre supplementation and its fermentability on control of symptoms are not known.

**Aim:** To evaluate the effects on gastrointestinal symptoms and faecal indices of non-fermentable sugarcane bagasse (SCB), alone or combined with fermentable, high-amylose resistant starch 2 (RS2) as adjuncts to a LFD in patients with IBS.

**Methods:** In a double-blinded, cross-over, feeding study, patients were evaluated during a 7-day baseline and then randomised to one of three dietary interventions: LFD (23 g/d total fibre); LFD with SCB (33 g/d); LFD with SCB and RS2 (45 g/d). Most of the food was supplied. Each diet lasted 14 days, with  $\geq 21$ -day wash-out between. End-points were gastrointestinal symptoms, including satisfaction with stool consistency, assessed daily via 100-mm visual analogue scale and indices of bowel habit including a 5-day faecal output. While the trial has finished, unblinding has yet to occur.

**Results:** Twenty patients completed the study. Overall symptoms were  $> 10$  mm lower than compared with baseline with no differences across diets ( $P > .05$ ; mixed-model ANOVA). Two diets were associated with 38% to 47% greater faecal output ( $P < .05$ ; repeated-measures

ANOVA), but stool form, frequency and satisfaction with stool consistency were similar across the groups.

**Conclusion:** In patients with IBS on a LFD: (1) adding non-fermentable  $\pm$  fermentable fibre does not induce symptoms; and (2) altering faecal bulk has no impact on stool form, frequency or satisfaction with consistency.

**Contact Author:** Daniel So - daniel.so@monash.edu

### ID: 198 | Feasibility and clinical utility of a culturally adapted interactive online malnutrition screening tool

Jane Stewart<sup>1</sup>, Emma Gore<sup>1</sup>, Karla Gough<sup>1</sup>, Nicole Kiss<sup>2</sup>, Tanya McKenzie<sup>1</sup>, Jenelle Loeliger<sup>1</sup>  
<sup>1</sup>Peter MacCallum Cancer Centre, <sup>2</sup>Deakin University

**Background:** Evidence-based guidelines recommend nutrition risk screening for all cancer patients. The Malnutrition Screening Tool (MST) is commonly used in Australia but only available in English, creating an unmet need in culturally and linguistically diverse (CALD) patients.

**Aim:** To translate, culturally adapt and create an interactive online version of the MST in 10 languages other than English; then appraise adoption, acceptability, appropriateness and feasibility of the newly created tool in CALD patients (CPs) with cancer.

**Methods:** Industry professionals translated and culturally adapted the MST, recorded audio files and developed the online interactive tool. The newly created tool was piloted in three Victorian health services with patients who spoke the top six preferred non-English languages. Study outcomes were assessed using operational data, responses to customised evaluation questions and focus group data from seven health professionals (HPs).

**Results:** Adoption was satisfactory, with 36 of 38 CPs approached consenting and using the tool. Acceptability was high as evidenced by patient ratings of the clarity of instructions, questions and recommendations. HPs also reported the tool was easy to use. The tool was considered appropriate for use without an interpreter by most participants (69%), but the online format may not be appropriate for all CPs. Median time taken to complete the tool was 3 minutes.

**Conclusion:** We successfully translated, culturally adapted and converted the MST into an interactive online tool. It was deemed acceptable and feasible by both CPs and HPs. For some patients, appropriateness may depend on the availability of interpreters.

**Contact Author:** Jane Stewart, jane.stewart@petermac.org.



### ID: 192 | Cracking the code - Improving accuracy of hospital acquired malnutrition coding

Jenna Stonestreet<sup>1</sup>, Sally Barrimore<sup>1</sup>, Lynn Hallawell<sup>1</sup>, Karen Atkinson<sup>1</sup>, Jennifer Hall<sup>2</sup>, Jack Bell<sup>2</sup>

<sup>1</sup>The Prince Charles Hospital, <sup>2</sup>Queensland Health

**Background:** Accurate coding of malnutrition is critical to capture the appropriate case-mix reimbursement or conversely, to inform allocation of a financial penalty if the malnutrition was hospital acquired (HA).

**Aim:** To evaluate the impact of an interdisciplinary intervention to improve the coding accuracy of HA malnutrition, using the Knowledge-to-Action (KTA) framework.

**Methods:** The steps of the KTA cycle were addressed through a literature review, local staff engagement and the development of a dietitian-led collaborative implementation program with Health Information Managers and Clinical Coders at an Australian tertiary hospital. Coded HA malnutrition cases were retrospectively audited by two senior dietitians pre and post this interdisciplinary implementation. Accuracy of coding was evaluated using a set of pre-determined criteria.

**Results:** At baseline, 29% (n = 30) of HA malnutrition cases were coded correctly. Using the KTA framework, interventions were implemented including regular education to dietitian and clinical coding teams, monthly dietitian-led coding audits, and the implementation of a documentation sticker to differentiate whether malnutrition diagnoses were present on admission or hospital acquired. Accuracy improved to 63.8% (n = 30) in the 2018/2019 financial year and further again to 85% (n = 22) in the 2019/2020 financial year.

**Conclusion:** A locally tailored knowledge-to-action implementation program increased the coding accuracy of HA malnutrition. Collaboration between those that diagnose malnutrition and code is important to ensure that episodes that are flagged as hospital acquired, are indeed correct for accurate payment and to drive improvements in patient care.

**Contact Author:** Jenna Stonestreet - jenna.stonestreet1@gmail.com

### ID: 139 | Evaluation of a dietetic student nutrition service for peripheral arterial disease patients

Stacie Attrill<sup>1</sup>, Christopher Delaney<sup>2</sup>, Michelle Miller<sup>1</sup>, Jenni Suen<sup>1</sup>

<sup>1</sup>Flinders University, <sup>2</sup>Southern Adelaide Local Health Network

**Background:** Service learning has been demonstrated to assist knowledge and skill development amongst

nutrition and dietetic students. While service learning can benefit students, clinical patient outcomes are rarely reported in the same context.

**Aim:** To evaluate a Dietetic Student Nutrition Service for all student year levels on the perceptions of competency and professional identity development and clinical patient outcomes.

**Methods:** Student perceptions were evaluated through completion questionnaires and semi-structured interviews. Student data were collated, and thematic analysis was conducted. Patient participants were randomised to receive a 12-week student nutrition care intervention or usual care. Paired *t*-tests were conducted for within-group analysis and independent sample *t*-tests for between-group analysis where statistical significance was set at  $P < .05$ .

**Results:** From the perception of 23 dietetic students, exposure to a safe learning environment that mimicked dietetic practice across both clinical and community settings assisted students to gain a range of dietetic skills and develop competencies across all four DAA competency domains. Students also developed confidence and professional identity as emerging dietitians. Intervention patients reduced their intake of discretionary foods (4.2-2.2 serves,  $P < .05$ ) and demonstrated reductions in total cholesterol (4.5-3.9 mmol/L,  $P < .05$ ) and systolic blood pressure (151-138 mmHg,  $P < .05$ ).

**Conclusion:** Dietetic students perceived that the service-learning model assisted their development of dietetic competencies and professional identity. Patients made positive dietary changes that improved cardiovascular risk factors. Incorporating service learning in the dietetic curriculum across all year levels could benefit students and patients receiving nutrition service.

**Contact Author:** Jenni Suen - suenjenni@gmail.com

### ID: 41 | Meal selection trends of patients on room service

Mui Siew Tan<sup>1</sup>, Alice Doring<sup>2</sup>, Jennifer Hall<sup>2</sup>, Bianca Neaves<sup>2</sup>

<sup>1</sup>Queensland University of Technology, <sup>2</sup>Queensland Health

**Background:** Room service was implemented in a tertiary hospital in Brisbane, Queensland in 2019. Having flexibility in foodservice allows the opportunity to review meal selection patterns unrestricted by organisationally set mealtimes and menu choice. Menu item popularity results can be extrapolated into other foodservice models, informing menu design based on patient preference with consideration of associated costs.

**Aim:** To identify food selection patterns on room service to inform menu design and nutrition strategies to improve intake.

**Methods:** Meal costs were derived and compared against traditional ordering systems. A retrospective audit of patient meal selection data (n = 93 958) from June to August 2020 from the menu management system including date, meal type, and item ordered was conducted. Meal items were analysed based on frequency and order timing, and meal costs were compared against the traditional model.

**Results:** A total of 7716 patients were included in the analysis; 99% of the sample were receiving room service, of which 84% ordered independently. Average daily cost of meal per patient per occupied bed day was 18% higher on room service than traditional, with a 22% higher cost for patients requiring assistance with ordering. Patients preferred cereal or hot food for breakfast, salad or sandwich for lunch, and a dinner of hot mains, sides and deserts. Savoury snacks were more popular than sweets.

**Conclusion:** In healthcare, foodservice dollar needs to be reviewed to ensure efficiencies and alignment with patient needs. This project provided first insights into patient meal selections on room service which has benefit to all foodservice systems.

**Contact Author:** Mui Siew Tan - tanmuisiew97@gmail.com

### ID: 242 | How should we judge edible oils? An umbrella review of nutrition composition and health effects

Scott Teasdale<sup>1</sup>, Skye Marshall<sup>1,2</sup>, Kylie Abbott<sup>1</sup>, Tim Cassettari<sup>1</sup>, Emily Duve<sup>1</sup>, **Flavia Fayet-Moore**<sup>1</sup>  
<sup>1</sup>Nutrition Research Australia, <sup>2</sup>Bond University

**Background:** Current dietary guidelines in Australia and other Western countries base their edible oil and fat recommendations solely on saturated fat content due to its link to cardiovascular disease.

**Aim:** To determine which nutritional and bioactive components make up commonly consumed edible oils and fats and explore their health effects on high burden chronic diseases.

**Methods:** An umbrella review conducted in two stages. First, food composition databases and studies were examined to profile nutrient and bioactive content of edible oils and fats. Second, PUBMED and Cochrane databases were searched for umbrella reviews, systematic reviews, and, where there was insufficient review evidence identified, randomised controlled trials and cohort studies.

**Results:** Five nutritional and bioactive components were profiled: fatty acid composition, tocopherols, biophenols,

phytosterols, and squalene. There was substantial systematic review evidence for fatty acids (n = 53 studies), tocopherols (n = 21 studies), biophenols (n = 36 studies), and phytosterols (n = 32 studies); but not squalene (n = 1 RCT). Edible oils and fats high in mono- and poly-unsaturated fatty acids, total biophenols, total phytosterols, and  $\alpha$ -tocopherol had beneficial effects on high burden chronic disease outcomes.

**Conclusion:** A shift in how we judge edible oils and fats is required. Findings suggest edible oils and fats which are high in mono- and poly-unsaturated fatty acids, total biophenols, total phytosterols, and  $\alpha$ -tocopherol should be recommended; but judgements should not be based on saturated fatty acid profile alone. Edible oils and fats should be considered together with other sources of these nutrients and bioactives recommended in dietary guidelines.

**Contact Author:** Scott Teasdale - scott@nraus.com

### ID: 77 | Investigating barriers of university staff to embed Indigenous Australians' perspectives and pedagogies into university curricula

**Andrew Thompson**<sup>1</sup>, Dennis Foley<sup>2</sup>, Rati Jani<sup>2</sup>, Jane Kellett<sup>2</sup>, Catherine Knight-Agarwal<sup>2</sup>, Tanya Lawlis<sup>2</sup>, Rebecca Mete<sup>2</sup>, Michelle Minehan<sup>2</sup>, Holly Northam<sup>2</sup>, Rhonda Wilson<sup>2</sup>, Rachel Bacon<sup>2</sup>

<sup>1</sup>Outback Division of General Practice, <sup>2</sup>University of Canberra

**Background:** A landmark commitment was made as part of the National Registration and Accreditation Scheme Statement of Intent to ensure availability of culturally safe health services for Indigenous Australians. This will require graduates to be culturally safe when entering the workforce which is consistent with the National Competency Standards for Australian dietitians.

**Aim:** To collect baseline data from academics about the use of Aboriginal and/or Torres Strait Islander perspectives and pedagogies within the current health curricula.

**Methods:** Under the leadership of an Expert Advisory Group, all health academics (n = 138) from an Australian university were emailed a research-informed 21 question (18 closed; 3 open) purpose-built pilot-tested online survey covering participant demographics, educational practices, academic capability, implementation challenges, and required resources.

**Results:** Participants (n = 52; response rate 38%) from 11 disciplines [including nutrition and dietetics (12%)] were mostly female (72%), non-Indigenous (96%) and experienced (professionally - 50% had >15 years; educationally - 52% > 5 years). Academics reported insufficient knowledge to select (48%) and deliver appropriate

content (40%). Academics reported being unsure as to whether they had the right to educate on Indigenous issues (33%) and some reported that they did not have the right at all (29%).

**Conclusion:** These findings are consistent with previous studies indicating that academics have a lack of knowledge to select and deliver appropriate Indigenous content, and believe they lack the right to educate this content. University academics require additional support from their Indigenous counterparts and the university at individual, discipline, and institutional levels.

**Contact Author:** Andrew Thompson - andrew.thompson@outbackdivision.org.au

### ID: 172 | Food as a risk factor for the development of Crohn's disease: an international case-control study of food and food additive intake; the Enigma study

Gina Trakman<sup>1</sup>, Winnie Lin<sup>2</sup>, Amy Hamilton<sup>3</sup>, Amy Wilson-O'Brien<sup>3</sup>, Annalise Stanley<sup>3</sup>, Leo Orr<sup>2</sup>, Jessica Ching<sup>2</sup>, Jun Yu<sup>2</sup>, Mark Morrison<sup>4</sup>, Siew Ng<sup>2</sup>, Michael Kamm<sup>3</sup>

<sup>1</sup>La Trobe University/University of Melbourne/St Vincents Hospital, <sup>2</sup>Chinese University of Hong Kong, <sup>3</sup>St Vincent's Hospital, Melbourne, <sup>4</sup>University of Queensland

**Background:** Ultra-processed food is emerging as a key risk factor for development of Crohn's Disease (CD), and perpetuating ongoing inflammation. This may be mediated through effects of food additives on enteric microbiota. Which foods are involved, and their contribution in regions of emerging and high incidence of CD, are unknown.

**Aims:** To assess early life processed food consumption in patients with CD and controls, in areas of high (Australia) and intermediate (Hong Kong [HK]) CD incidence.

**Methods:** This case-control, observational study evaluated 195 CD patients, 53 first-degree relatives, 89 household-members, and 42 unrelated, healthy controls (n = 42) from major IBD centres in Australia (n = 183) and HK (n = 159). Early-life processed food intake was assessed using previously validated questionnaires.

**Results:** Australian CD patients were more likely to have consumed fast-food than their household members ( $P = .043$ ) and less likely to have consumed processed dairy foods than healthy controls ( $P = .040$ ). HK CD patients were more likely to have consumed processed dairy foods than healthy controls ( $P = .037$ ). Combining Australian and HK cohorts, CD patients were more likely to have consumed processed meat than their household members ( $P = .030$ ), more likely to have consumed

processed fruit than their first-degree relatives ( $P = .022$ ), and more likely to consumed fast food than healthy controls ( $P < .001$ ).

**Conclusion:** We found that CD patients were more likely to have consumed ultra-processed foods in early life indicating a possible trigger for disease initiation. These findings indicate important targets for disease prevention and treatment.

The ENIGMA study is supported by the Helmsley.

**Contact Author:** Gina Trakman - g.trakman@latrobe.edu.au

### ID: 86 | Comparing the prevalence of orthorexia nervosa in irritable bowel syndrome, eating disorders and healthy controls

Caroline Tuck<sup>1</sup>, Nessmah Sultan<sup>1</sup>, Matilda Tonkovic<sup>1</sup>, Jessica Biesiekierski<sup>1</sup>

<sup>1</sup>La Trobe University

**Background:** Orthorexia nervosa occurs when people restrict their diet based on its quality rather than quantity. Individuals become so obsessed with eating healthily that it leads to malnutrition or impaired functioning. It has been suggested that orthorexia prevalence may be higher when restrictive dietary interventions are used, such as irritable bowel syndrome (IBS).

**Aim:** To measure the prevalence of orthorexia in participants with IBS, participants with eating disorders (ED) and healthy controls (HC), using a cross-sectional survey.

**Methods:** IBS participants (Rome IV), ED participants (mild-moderate symptoms in past 5 years using DSM-5), and healthy controls were recruited via online advertisement. Orthorexia was assessed utilising the 'Sick, Control, One-stone, Fat, Food' (SCOFF, >2 indicating disordered eating) and eating habits questionnaire (EHQ). Food-related quality of life (FR-QOL) and dietary intake (comprehensive nutrition assessment questionnaire) were also assessed. Data were analysed using one-way ANOVA.

**Results:** Forty-five IBS, 16 ED and 52 healthy controls completed the study. Orthorexic traits were exhibited more often in the IBS and ED cohorts compared to healthy controls (IBS, ED, and HC respectively, SCOFF percentage scoring >2, 71% vs 69% vs 37%,  $P < .01$ ; EHQ mean  $\pm$  SD, 54  $\pm$  10 vs 56  $\pm$  14 vs 45  $\pm$  10,  $P < .01$ ). Both IBS and ED participants had worse FRQOL than healthy controls (median  $\pm$  IQR, 55(20.5) vs 72(40.5) vs 94(59),  $P < .05$ ). Orthorexic traits were not associated with differences in dietary intake.

**Conclusion:** Orthorexic traits are present in more than half of patients with IBS. Clinicians should be mindful of

orthorexia in clinical practice, especially in patients with IBS and ED.

**Contact Author:** Caroline Tuck - C.Tuck@latrobe.edu.au

### ID: 193 | Evaluation of Australian food literacy programs with an experiential cooking component

**Aimee Turnbull**<sup>1</sup>, Andrea Begley<sup>1</sup>

<sup>1</sup>*Curtin University*

**Background:** Food literacy programs with an experiential cooking component aim to improve the practical food literacy skills of their participants. There is evidence to support that these programs are effective at increasing food literacy behaviours. However, there is limited research on how and why these programs are effective. Realist evaluation aims to answer these questions by understanding the implicit or invisible forces, called mechanisms, which lead to program outcomes in particular contexts. Understanding how and why programs work will assist in future program development.

**Aim:** To use experiences of nutrition education professionals in Australia to assess the context, mechanisms, and outcomes of food literacy programs.

**Methods:** A qualitative design following realist evaluation principles was used. Online interviews were conducted with health professionals who had facilitated nutrition education programs with an experiential cooking component in Australia, within the last 2 years. Interview transcripts were analysed thematically, identifying contexts and mechanisms related to outcomes.

**Results:** Seven professionals were recruited who had experience working with food literacy programs with adults and/or children, in metropolitan and regional Australia. Contexts focused on participant's low socioeconomic status, physical and mental health concerns. Eight mechanisms were identified, including flexible facilitators, feelings of empowerment, practicing different skills, and social connection. A number of emerging mechanisms were also identified which require further exploration, including peer support and home dynamics. Outcomes included participant engagement and increased cooking confidence.

**Background:** Further application of realist evaluation research will improve the design of food literacy programs.

**Contact Author:** Aimee Turnbull - aimee.turnbull@postgrad.curtin.edu.au

### ID: 57 | Continuing nutrition assessments during COVID-19 pandemic: a pilot exploration in kidney disease

**Angela Vivanti**<sup>1</sup>, Marguerite Conley<sup>1</sup>, Jan Hill<sup>2</sup>

<sup>1</sup>*Princess Alexandra Hospital*, <sup>2</sup>*Queensland Health*

**Background:** Dietetic practice changes have occurred as a result of physical distancing measures implemented due to COVID-19. Nutritional assessment is fundamental to practice and is now frequently undertaken excluding the physical assessment due greater application of tele-nutrition. Anecdotally, dietitians have raised concerns over the agreement of assessments when physical examination could not be completed.

**Aim:** To explore the sensitivity of nutritional assessments when undertaken without a physical examination.

**Methods:** Original paper-based Subjective Global Assessment (SGA) documentation from the tertiary hospital's nutrition audit was re-assessed several years later by a blinded experienced clinician without referring to the physical examination. All available admissions to the kidney-disease ward were classified as well- or malnourished. Paired repeated observations of initial audit SGA and then subsequent SGA using history alone were completed. Sensitivity, specificity, positive and negative predictive values were assessed. Cohen's kappa coefficient determined agreement between repeat re-assessments (intra-rater reliability after 10 days).

**Results:** The initial audit revealed 33% malnutrition (9/27, SGA-B) using the full SGA assessment. Eight of the nine were confirmed as malnourished during re-assessment using SGA history alone without physical examination. The pilot indicated high sensitivity (88%, 8/9) specificity (94.4%, 17/18) positive (88.8%, 8/9) and negative (94.4%, 17/18) predictive values. High intra-rater reliability was confirmed (100%, 27/27; Kappa Value 1.0).

**Conclusion:** The majority of SGA assessments in the kidney disease wards were identical when re-assessed excluding the physical assessment. This indicates value continues in completing the SGA even when physical assessments cannot be undertaken.

**Contact Author:** Angela Vivanti - angela.vivanti@health.qld.gov.au

### ID: 188 | Is virtual competency-based assessment possible? Revising the Dietetic Skills Recognition oral exam

**Ruth Vo**<sup>1</sup>, Claire Palermo<sup>2</sup>, Bree Murray<sup>3</sup>, Suzanne Waddingham, Joanne Leeson<sup>3</sup>

<sup>1</sup>*Praxcess*, <sup>2</sup>*Monash University*, <sup>3</sup>*Dietitians Australia*

**Background:** A recent review of the Dietetic Skills Recognition process for overseas trained dietitians identified a need to redesign the oral exam component, one of three stages used to determine eligibility for the Accredited Practising Dietitian credential. The current oral examination assesses verbal counselling skills, response to cues, critical thinking, insight and reflection in a single client-centred dietetic counselling situation in a 60-minute oral examination consisting of reading time, a role play, debriefing and self-critique.

**Aim:** To align the oral examination component with best practice in oral competency-based assessment.

**Methods:** Surveys with past candidates (n = 93) and assessors (n = 12) informed the review. In addition, the literature on oral examinations across other health professions and consideration of the more recent dietitian competencies informed the redesign. Contextual considerations included challenges such as the burden of cost and time for candidates, the assessor skill and behaviour variations and more seriously, social distancing requirements.

**Results:** The proposed oral examination will be virtual comprising of four tasks each with a different scenario and competency focus including (i) nutrition assessment and diagnosis (ii) education and counselling (iii) teamwork and interprofessional decision making, and (iv) planning, monitoring, evaluation, record keeping and reflection. Scenarios will focus on priority health and nutrition needs of the Australian population.

**Conclusion:** A trial of the exam and assessor training will now proceed with overseas trained dietitians applying this year.

**Contact Author:** Ruth Vo - ruthvosolutions@gmail.com

#### ID: 34 | The efficacy of nutritional interventions trials for type 2 diabetes: A systematic review and meta-analysis

Tian Wang<sup>1</sup>, George Siopis<sup>1</sup>, Hiu Yee Wong<sup>2</sup>, Margaret Allman-Farinelli<sup>1</sup>

<sup>1</sup>The University of Sydney, <sup>2</sup>Hospital Authority

**Background:** Diet is critical in diabetes management and dietitians are increasingly realising there is a range of dietary patterns that support patients to achieve optimal glycaemic control.

**Aim:** To assess the efficacy of randomised controlled trials of nutritional interventions for people with type 2 diabetes, and to determine the quality of dietary assessment in these trials.

**Methods:** MEDLINE, EMBASE, CINAHL and CENTRAL were searched, from inception until September

2019. Demographics, population size, study design and type of dietary intervention were extracted. Investigators assessed risk of bias and quality of dietary measurements using the Cochrane Risk of Bias Assessment Tool 2.0 and a redeveloped EURICA tool, respectively. Random-effects meta-analysis assessed mean changes in HbA1c.

**Results:** Of 2552 records retrieved, 23 studies met the inclusion criteria. The interventions included manipulations of fat, glycaemic index/load and carbohydrate as well as Atkins, paleolithic, ketogenic and Mediterranean diets. Nine interventions achieved the desired impact on HbA1c, five with a clinically significant decrease of approximately 0.5%, and four studies that aimed to have no change in HbA1c. These studies used new methods of dietary management using on-line coaching and total meal delivery system as well as low carbohydrate, low GL with increased n-3 polyunsaturated fats, and the Mediterranean diet. The mean change in HbA1c was  $-0.26$  [ $-0.36, -0.16$ ]%, but heterogeneity was high at  $I^2 = 79\%$ . Fifteen studies had poor quality of dietary assessment.

**Conclusion:** Overall improvement in HbA1c occurred with these diverse nutrition interventions but would only be considered clinically significant in seven studies.

**Contact Author:** Tian Wang - twan6100@uni.sydney.edu.au

#### ID: 132 | Modelling the effect of environmentally sustainable food substitutions on nutrient intake in pregnant women

Tian Wang<sup>1</sup>, Allison Grech<sup>1</sup>, Hasthi Dissanayake<sup>1</sup>, Sinead Boylan<sup>1</sup>, Michael Skilton<sup>1</sup>

<sup>1</sup>The University of Sydney

**Background:** Food production is a major contributor to anthropogenic greenhouse gas emissions (GHG). However, there remain concerns that consuming sustainable foods will increase the likelihood of nutritional deficiencies during pregnancy.

**Aim:** To identify commonly consumed foods of pregnant women, and determine the effect of their replacement with sustainable alternatives on nutrient intake.

**Methods:** Dietary intake data of 171 pregnant women were assessed using a validated food frequency questionnaire. Food items that contribute the most to energy and protein intake were identified. Of these, foods that produced the highest GHG emissions (Poore et al. 2018) were matched with proposed sustainable alternatives, and their impact on nutrient provision determined.

**Results:** Meats, grains and dairy products were important sources of energy and protein intake. With the highest GHG emissions, beef was selected as the

reference food. Proposed alternatives included lamb, chicken, eggs, fish, tofu, legumes and nuts. The most pronounced reductions in CO<sub>2</sub> emissions were from replacing beef with tofu, legumes and nuts. Replacing a single-serve of animal-derived foods with a plant-based alternative has minimal effect on overall nutrient intake. For example, replacing one serve per week of beef with an isocaloric serve of firm tofu for the duration of pregnancy could reduce GHG emissions by 372 kg CO<sub>2</sub> eq, and increase folate (+28.1 µg/serve) and fibre (+3.3 g/serve) intake without compromising iron (+1.1 mg/serve) intake.

**Conclusion:** Within the context of a mixed diet, small dietary substitutions with sustainable alternatives substantially reduce environmental impact without compromising nutrient adequacy.

**Contact Author:** Tian Wang, twan6100@uni.sydney.edu.au

### **ID: 171 | The impact of COVID-19 enforced lockdown on food availability and nutritional intake in Australian adults**

Emma Watson<sup>1</sup>, Linda Ferrington<sup>1</sup>, Susan Heaney<sup>2</sup>  
<sup>1</sup>University of New South Wales, <sup>2</sup>University of Newcastle

**Background:** During COVID-19 lockdown in Australia, media reports of panic buying and food shortages were widespread, leading to concerns about the impact on food availability and nutritional intake in Australians.

**Aim:** To investigate the impact of COVID-19 on food availability and resulting changes to nutritional intake.

**Methods:** An online questionnaire was distributed via social media using probabilistic sampling. Participants were asked to identify categories of foods they were unable to source and whether this affected meal preparation. A free text response question sought comment on how this affected meal preparation. Thematic analysis of free-text responses was conducted to elicit common themes.

**Results:** While 80% of participants (n = 266) reported no changes to availability of usual food items during lockdown, 20% were unable to do so (n = 69). Potatoes/rice/pasta (27%), tinned food (17%), meat (15%), eggs (9%), and vegetables (8%) were the products listed as being most difficult to source, resulting in 70% of those who indicated being unable to source usual foods, having meal choices impacted. Thematic analysis revealed four common themes identified by participants; adapted or changed meals; more processed/pre-prepared meals; increased cost; increased creativity.

**Conclusion:** While the majority of respondents were not affected by food shortages in our sample, the small proportion who were impacted reported the need for increased creativity in the kitchen along with adapting or changing meals as needed and having to eat more convenience foods. A positive outcome of the COVID-19 pandemic may be the increased creativity with meal preparation and adaptability to varying food availability.

**Contact Author:** Emma Watson - erwatson1705@gmail.com.

### **ID: 123 | What would you like to eat? A review of meal choice in residential aged care**

Mikaela Wheeler<sup>1</sup>, Karen Abbey<sup>1</sup>, Sandra Capra<sup>1</sup>  
<sup>1</sup>University of Queensland

**Background:** Having choices at mealtimes in residential aged care has been identified to increase resident's intake, quality of life, satisfaction and perceived autonomy. The definition of choice is the act of choosing between two or more possibilities, however, what choice means to residents is unknown.

**Aim:** To attempt to understand what choice means for residents in residential aged care in grey literature sources.

**Methods:** A scoping review was conducted using Google, Google Scholar and hand searching. Using directed content analysis, relevant sections were identified. Quality assessment was completed for each text.

**Results:** Twenty eight texts were included in the final review, including 11 policy documents, 13 guidelines and five reports. The majority of texts gave broad recommendations rather than specifically defining a level of choice that should be provided to aged care residents. Few texts specified what choice means in this context but it was identified that the way choice is viewed in aged care differs greatly to that of adults outside of care. The role of regulation and individual home policies in aged care was discussed as a potential barrier to choice in addition to the level of choice provided acting as an important indicator in accreditation of homes.

**Conclusion:** The uncertainty surrounding what choice means in residential aged care and the resulting unclear policies and guidelines, provides ambiguity for managers and accreditors and has the potential to negatively affect the level of choice provided to residents.

**Contact Author:** Mikaela Wheeler - mikaela.wheeler@uq.net.au

## ID: 108 | Implementation and Evaluation of a Nursing-Led Nutrition Care Pathway for patients Undergoing a TAVI Workup

Emma Whitmore<sup>1</sup>, Jack Bell<sup>2</sup>, Dale Murdoch<sup>3</sup>, Mary Green<sup>3</sup>, Megan Normoyle<sup>3</sup>

<sup>1</sup>Metro North Hospital and Health Service, <sup>2</sup>Queensland Health, <sup>3</sup>The Prince Charles Hospital

**Background:** More than 50% of patients with severe aortic stenosis, the primary indication for Transcatheter Aortic Valve Implantation (TAVI), are malnourished. Malnourished patients have increased risk of mortality and postoperative complications. Nursing led nutrition care models provide an opportunity for timely supportive nutrition care for patients screened at risk of malnutrition.

**Aim:** To implement a nurse-led malnutrition screening and support pathway in outpatient clinics for elective TAVI patients at risk of malnutrition.

**Methods:** A prehabilitation implementation evaluation aligning to the knowledge-to-action framework. Pre-admission clinic nurses were trained to assess Body Mass Index (BMI), Malnutrition Screening Tool (MST) scores & provide high energy high protein (HEHP) education. At-risk patients (MST >2 or BMI <22 kg/m<sup>2</sup>) were provided with individualised HEHP education by the nurses. Patients identified as high-risk of malnutrition (MST >3 or BMI <18.5 kg/m<sup>2</sup>) were referred to the dietitian for specialised care. On admission for TAVI, patients were weighed and asked a simple question regarding their adherence to dietary recommendations provided by their nurse.

**Results:** Seventy-one TAVI workups were undertaken over 12 weeks from January to March 2020. Of these, 36 patients were well nourished, 12 were at-risk, and 23 were high-risk. Of the 12 patients who received nurse-led care, 10 reported adhering to dietary recommendations, and eight gained weight (mean weight gain 2.1 kg ± 0.79).

**Conclusion:** This study confirms high prevalence of malnutrition risk in patients with severe aortic stenosis treated with TAVI. Preliminary effectiveness evaluation suggests high adherence with a nursing led nutrition support model for at risk patients.

**Contact Author:** Emma Whitmore - emmawhitmore23@hotmail.com.

## ID: 12 | Addressing barriers and enablers to dietitians completing body composition assessments as part of routine care

Shelley Wilkinson<sup>1</sup>, Chloe Jobber<sup>2</sup>, Fiona Nave<sup>3</sup>, Elyssa Hughes<sup>4</sup>, Barbara van der Meij<sup>5</sup>

<sup>1</sup>The University of Queensland, <sup>2</sup>Mater Health, <sup>3</sup>Private, <sup>4</sup>Queensland Health, <sup>5</sup>Bond University

**Background:** Malnutrition, sarcopenia and cachexia are clinical wasting syndromes characterised by muscle loss. Systematic monitoring by body composition assessment is recommended for diagnosis, treatment and monitoring of the syndromes. However, limited literature exists regarding integration of this process into routine practice.

**Aim:** To incorporate body composition assessment into a dietetic department using an implementation science approach.

**Methods:** Using a pre-post design, we assessed use of body composition assessment devices and (perceived) competency and attitudes of clinical dietitians towards body composition assessment before and after interventions. Barriers and enablers were categorised and interventions planned. Strategies included: (1) upskilling (professional development strategy), (2) modelling and reducing fear of change (Clinical Champion project), and (3) embedding as usual practice (departmental integration).

**Results:** Response rates were 84.6% (22/26) and 61.9% (13/21), respectively. Barriers were identified in all framework domains. Numerous enablers also existed. Two strategies were incorporated as planned (upskilling; embedding as usual practice), with one (modelling and reducing fear of change) iteratively applied. The Clinical Champion project ran for 12 rather than 6 months. One third of champions felt supported to conduct BCA (pre), which increased to 100% (post). Pre and post surveys showed a marked reduction in most perceived barriers and improved recognition of enablers across all framework domains; with a large proportion of 'not applicable' given for many barriers (post).

**Conclusion:** Dietitians experience numerous individual, team, and organisational barriers to adopting these assessments in clinical practice. Systematic, evidence-informed implementation can facilitate integration of BCA into dietitians' practice and departmental processes.

**Contact Author:** Shelley Wilkinson - sawilkin@hotmail.com

## ID: 194 | How did the COVID-19 pandemic impact dietetics placements? Student perceptions of practice readiness

Emily Williams<sup>1</sup>, Lauren Williams<sup>1</sup>, Lana Mitchell<sup>1</sup>

<sup>1</sup>Griffith University

**Background:** In 2020, the COVID-19 pandemic changed the provision of healthcare. While some Universities cancelled

placements, others maintained them. The impact on students of being on placement during the pandemic is not known.

**Aim:** To investigate how being on placement during COVID-19 impacted perceived readiness to practice as a dietitian, for a cohort of students.

**Methods:** Twenty-eight student dietitians from Griffith University who completed placement from January to June 2020 were invited to participate in focus group interviews. Nine students participated across two focus groups (group 1 n = 4; group 2 n = 5) held online. Sessions were audio recorded, transcribed and thematically analysed.

**Results:** Readiness to practice was conceptualised by three themes: 1) shaped by preparation, experiences and perspectives; 2) confidence to know what to do or how to find out, and; being job-ready is different to being practice ready. These graduating students felt ready to practice and actually viewed their placement during COVID-19 as positively impacting that readiness. They described readiness as a spectrum, and were confident that if they did not know an answer, they could find it out. While they felt ready for dietetics practice, they wanted additional 'job-ready' skills in obtaining employment and translating practice skills to work in sectors not experienced on placement such as private practice.

**Conclusion:** Despite being on placement at the height of the COVID-19 disruption, these students felt sufficiently confident and prepared to practice as dietitians. Consideration needs to be given to other aspects of preparation for work roles, particularly in other sectors.

**Contact Author:** Emily Williams - emily.williams@griffith.edu.au

### **ID: 27 | Achieving health literacy- what is known? A difference in understanding of health literacy attainment between service providers and Australian re-settled refugees from Myanmar**

**Carrie Wong**<sup>1</sup>, Annie-Claude Lassemillante<sup>1</sup>, Carolynne White<sup>2</sup>, Regina Belski<sup>1</sup>

<sup>1</sup>Swinburne University of Technology, <sup>2</sup>MIND

**Background:** Health Literacy (HL) is a measure of an individual's ability to understand and apply health information/knowledge to support health behaviour. People from refugee backgrounds have poorer health outcomes compared with those from non-refugee backgrounds, and low HL may be a contributing factor. At present, little is known about the HL needs of Australian re-settled refugees.

**Aims:** To undertake a preliminary investigation on the health literacy needs of Australian settled refugees from Myanmar and compare this with service provider perceptions.

**Methods:** Focus group and semi-structured interview data from 24 resettled refugees from Myanmar and nine service providers in Melbourne Australia were analysed through deductive qualitative content analysis based on the 9 HL domains of the Health Literacy Questionnaire (HLQ).

**Results:** Refugees and health service providers have contrasting perspectives of refugees' HL practice. Refugee participants named examples of actively engaging in their health, had support from community for health, and in general had high trust and satisfaction with the Australian healthcare system. In contrast, service providers named barriers to health such as lack of knowledge, social and economic factors and systemic barriers to access to healthcare.

**Conclusion:** Our findings suggest that service providers and refugees differ in their perceptions of health and healthcare. There is need for a more in-depth assessment of HL needs of refugees and for greater understanding on the impacts of these so that health services, health education and interventions can be tailored appropriately.

**Contact Author:** Carrie Wong - ckwong@swin.edu.au

### **ID: 28 | The incidence and characteristics of long-stay adult inpatients with hospital acquired malnutrition across five Australian public hospitals**

**Talia Woodward**<sup>1</sup>, Michelle Palmer<sup>1</sup>, Lynda Ross<sup>2,3</sup>, Jan Hill, Fiona Naumann, Breanne Hosking, Rachel Stoney<sup>4</sup>, Christine Josephson

<sup>1</sup>Queensland Health, <sup>2</sup>Queensland University of Technology, <sup>3</sup>Griffith University, <sup>4</sup>Bayside Health Service, Metro South Health

**Background:** Malnutrition is prevalent in hospitals; however, little is known about patients who first become malnourished during admission.

**Aim:** To determine the incidence and describe the characteristics of long-stay adult inpatients who developed Hospital Acquired Malnutrition (HAM) across five Australian public hospitals.

**Methods:** A retrospective clinical audit of hospital administrative data was conducted. Adult patients (aged ≥18 years) with a length of stay (LOS) >14 days in a Metro South Health hospital between July 2015 and January 2019 were eligible. Demographic and clinical data were sourced from administrative data and patients' medical records. Dietitians reviewed the medical records of patients clinically coded with malnutrition to determine the incidence of HAM. Univariate and logistic regression analyses were used to determine patient descriptors associated with HAM, compared with those not malnourished or those malnourished on admission.



**Results:** A total of 17 717 patients were eligible (45% female,  $63 \pm 20$  years, LOS 24 [15-606] days). Overall malnutrition prevalence was 18% ( $n = 3224$ ), with 1% ( $n = 208$ ) determined to have HAM. Patients with HAM had a LOS approximately 26 days longer than patients who were malnourished on admission or not malnourished ( $P < .001$ ). Longer LOS; patient inter-hospital transfer from or to another hospital; or experiencing cognitive impairment, pressure injury or a fall while in hospital were associated with HAM (OR 1.006-3.6,  $P < .05$ ).

**Conclusion:** While incidence of HAM was low, a substantial number of patients were affected. Characteristics including longer LOS, inter-hospital transfer, cognitive impairment, pressure injury or a fall during admission may be useful for identifying those most at risk.

**Contact Author:** Talia Woodward - talia.woodward@outlook.com

#### ID: 84 | Evaluating the opportunity for technology use in bariatric surgery health services: A mixed methods study

Charlene Wright<sup>1</sup>, Jaimon Kelly<sup>1</sup>, Kyra Hamilton<sup>1</sup>, Rebecca Healy<sup>2</sup>, Jane Musial<sup>2</sup>, Katrina Campbell<sup>3</sup>

<sup>1</sup>Griffith University, <sup>2</sup>RBWH, <sup>3</sup>Metro North Hospital and Health Service

**Background:** Mobile health (mHealth) can assist to provide routine care, monitoring, and support to individuals requiring dietetic services.

**Aim:** To gain insight into barriers to attending appointments in-person, preferred health information delivery methods, current technology use, and acceptability of mHealth in adults electing bariatric surgery.

**Methods:** This mixed methods study recruited participants from a tertiary hospital via survey ( $n = 102$ ) and interview ( $n = 15$ ). Quantitative analysis was conducted using SPSS and qualitative, inductive content analysis in NVivo.

**Results:** One-third of participants ( $n = 38$ , 37%) identified barriers to attending in-person appointments including parking ( $n = 17$ , 45%), travel time ( $n = 16$ , 42%), and taking time off work ( $n = 15$ , 40%). Participants were willing to use email ( $n = 92$ , 90%), text messages ( $n = 87$ , 83%), and phone calls ( $n = 85$ , 83%) to engage with health providers. Themes identified were (i) Attributing success to dietitians and resources (ii) Motivated and able to access digital health (iii) Turning to online health communities (iv) Seeing a place for mHealth in service delivery, and (v) Future vision for care delivery. Majority managed post-operative dietary changes with in-person

support and dietitians were highly valued by patients. Challenges related to the need for more post-operative psychosocial support. Along with wanting help navigating mobile applications and online health communities.

**Conclusion:** Patients are accepting of mHealth to increase access to ongoing support and overcome barriers. Patients expressed need for more post-operative psychosocial support and help navigating appropriate technology. There is an opportunity for technology use in bariatrics surgery dietetic care and health services.

**Contact Author:** Charlene Wright - charlene.matthews@griffith.edu.au

#### ID: 241 | A bibliographic analysis of top-tier published nutrition and dietetics research in 1998 and 2018

Serene Yoong<sup>1</sup>

<sup>1</sup>Swinburne University of Technology

**Background:** In well developed areas such as nutrition, research frameworks recommend that studies should be increasingly focused on producing evidence to move research into practice.

**Aims:** This study sought to describe and compare study type, research design and translation phase of published research in nutrition and dietetic journals in 1998 and 2018.

**Methods:** This was a bibliographic analysis of nutrition and dietetics research. All eligible studies in the top eight nutrition and dietetics indexed journals in 1998 and 2018 were included. Two independent reviewers coded each study for research design (study type and study design) and translation phase (T0-T4) of the research.

**Results:** The number of publications (1998  $n = 1030$ , 2018  $n = 1016$ ) has not changed over time but the research type, design and translation phases have. The proportion of intervention studies in 1998 (43.8%) was significantly higher than 2018 (19.4%). In regards to translation phase, there was a higher proportion of T2-T4 research in 2018 (18.3% vs 3.8% in 1998); however, the proportion of T3/T4 research was still low (<3%).

**Conclusion:** There was a reduction in intervention and T0 publications, alongside higher publication of clinical study designs over time; however, published T3/T4 research in nutrition and dietetics is low. A greater focus on publishing interventions and dissemination and implementation is likely needed to increase the real-world impact of dietetics research.

**Contact Author:** Serene Yoong - syoong@swin.edu.au

**ID: 39 | Development of a new tool to monitor and identify inadequate oral intake in hospital**

**Adrienne Young**<sup>1,2</sup>, Jerrold Tan<sup>3</sup>, Ka Man Lau<sup>3</sup>, Lynda Ross<sup>3,4</sup>, Jessica Kinneally<sup>1</sup>, Anita Pelecanos<sup>5</sup>, Merrillyn Banks<sup>1</sup>

<sup>1</sup>Royal Brisbane & Women's Hospital, Metro North Hospital & Health Service, <sup>2</sup>School of Human Movement & Nutrition Sciences, Faculty of Health & Behavioural Sciences, The University of Queensland, <sup>3</sup>Queensland University of Technology, <sup>4</sup>Griffith University, <sup>5</sup>QIMR Berghofer

**Background:** There is a need for quick and easy methods to monitor nutritional intake in hospital and identify patients with poor intake. Food record charts are often used in clinical practice, with low levels of accuracy and completion.

**Aim:** To describe the development and evaluate the performance of a new tool to estimate energy and protein intake and identify poor nutritional intake amongst adult hospital patients.

**Methods:** Ninety trays were sampled and assessed independently using the new tool ('Meal Intake Points') and a weighed (reference) method. Performance was tested by measuring association (Spearman's correlation), agreement (proportion of meals within specified limits of reference method), and sensitivity and specificity to identify poor energy and protein intake.

**Results:** This new tool achieved very strong association for energy estimates ( $r = 0.91$ ) and strong association for protein estimates ( $r = 0.86$ ). Estimates for energy and protein were within 450 kJ and 4.5 g of the reference method in 77.8% and 62.2% of meals, respectively. It also displayed excellent performance as a screening tool (sensitivity 100%; specificity 76-80%). Minor revision of the original tool was needed to optimise performance.

**Conclusion:** 'Meal Intake Points' accurately estimates energy and protein intake and identifies patients with poor nutritional intake, providing a clinically relevant tool for use in hospitals to monitor intake and identify patients for proactive nutrition support. Further validation studies are needed to determine its performance in clinical practice, and whether it is useful in predicting hospital-acquired malnutrition.

**Contact Author:** Adrienne Young - adrienne.young@health.qld.gov.au

**ID: 169 | Improving weight bias internalisation and disordered eating in young women - The everyBODY study**

**Isabel Young**<sup>1</sup>, Natalie Crino<sup>2</sup>, Helen Parker<sup>1</sup>, Kate Steinbeck<sup>1</sup>, Helen O'Connor<sup>1</sup>

<sup>1</sup>University of Sydney, <sup>2</sup>Westmead Hospital

**Background:** Young women with overweight and obesity are often attracted to "quick-fix" diets which are unsustainable, driven by negative weight-based stereotypes and can encourage disordered eating. Such young women remain an under-researched group with high weight bias internalisation (WBI), self-derogation based on weight, and there is a need to address these issues to enable long-term, sustainable healthy eating.

**Aim:** To improve WBI and eating patterns in young women with overweight and obesity.

**Methods:** Healthy overweight and obese young women (BMI > 25; 18-25 year;  $n = 53$ ) engaged in a dietitian-led weight loss intervention, and either a cognitive behavioural therapy (CBT) group program addressing body image (everyBODY;  $n = 27$ ) or a CBT program for weight management (Control;  $n = 27$ ) over 12 weeks.

**Results:** Retention was 55%. Participation in the everyBODY arm was associated with improvements in WBI ( $P = .011$ ,  $d = 0.452$ ), body attitudes and weight management self-efficacy ( $P < .05$ ). The control arm had improvements in weight and some body attitudes ( $P < .05$ ). Participants across both arms saw improvements in disordered eating including a decrease in binge eating severity and episodes (everyBODY  $P = .001$ ,  $d = 0.996$ ; control  $P = .004$ ,  $d = 0.982$ ), and reduced body shape and eating concerns ( $P < .05$ ).

**Conclusion:** Improvements to disordered eating and shape and weight concerns were seen across both programs but only those in the everyBODY arm experienced reduced WBI. Follow up is currently being conducted to determine if reducing WBI is associated with sustaining improvements to eating habits, preventing young women from re-entering the "quick-fix" dieting cycle. Retaining young women in programs remains an ongoing challenge.

**Contact Author:** Isabel Young - ie.young@hotmail.com.

**ID: 154 | i-Rebound After Stroke - Eat for Health: Co-designing a Mediterranean Dietary intervention alongside Stroke Survivors**

**Karly Zacharia**<sup>1</sup>, Amanda Patterson<sup>1</sup>, Coralie English<sup>1</sup>, Emily Ramage<sup>1</sup>, Margaret Galloway<sup>1</sup>, Meredith Burke<sup>2</sup>, Raymond Gray<sup>2</sup>, Lesley MacDonald-Wicks<sup>1</sup>

<sup>1</sup>University of Newcastle, <sup>2</sup>Hunter Medical Research Institute

**Background:** Stroke causes a greater range of disabilities than any other condition. Even 10 years after stroke, 20% to 30% of stroke survivors have a poor range of outcomes affecting activities of daily living. Up to 80% of stroke can be prevented by modifying lifestyle and diet, but these outcomes make interventions to reduce stroke risk inherently complex. For effective translation into practice, interventions must be specific to end-user needs and described in detail for replication.

**Methods:** This study used an Integrated Knowledge Translation (IKT) approach and the Template for Intervention Description and Replication (TIDieR) checklist to co-design and describe a telehealth delivered diet program for stroke survivors. Stroke survivors and carers (n = 6), specialist dietitians (n = 6) and an IKT research team (n = 8) participated in a 4-Phase co-design process. Phase 1: the IKT team developed the research questions, identified essential program elements and workshop strategies for effective co-design. Phase 2: Participant co-design workshops used persona and journey mapping to create user profiles to identify barriers and essential

program elements. Phase 3: The IKT team mapped Phase 2 data to the TIDieR checklist and developed the intervention prototype. Phase 4: Co-design workshops were conducted to refine the prototype for trial. Rigorous IKT co-design fundamentally influenced intervention development. Modifications to the protocol based on participant input included ensuring all resources were accessible to people with aphasia, an additional support framework and resources specific to outcome of stroke.

**Results:** The feasibility and safety of this intervention is currently being pilot tested (Randomised controlled trial; 2019/ETH11533, ACTRN12620000189921).

**Contact Author:** Karly Zacharia - karly.zacharia@uon.edu.au

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**POSTER ABSTRACTS****ID: 175 | Charity gift card project—Compassion through food**

Tina Aboltins<sup>1</sup>, Julia Kuypers<sup>1</sup>, Micheala Gold<sup>1</sup>, Rachael Evans<sup>1</sup>, Talya Cortinovic<sup>1</sup>, Tara Buratto<sup>1</sup>

<sup>1</sup>Northern Health

**Background:** Long stay hospitalised patients are at increased risk of Hospital Acquired Malnutrition and commonly suffer from taste fatigue as a result of their extended stay.

**Aim:** To determine whether providing gift cards to the onsite café at the hospital could improve a patient's stay in hospital.

**Method:** Thirty six \$20 gift cards were purchased through department fundraising. Dietitians offered gift cards to long stay patients with ongoing poor oral intake. Patients on a texture modified diet, food allergies, immunocompromised/pregnant were excluded. Questionnaires were completed with patients before and after using the gift card.

**Results:** Thirty patients accepted gift cards. Twenty three (77%) patients completed the pre questionnaire and 20 (67%) patients completed the post questionnaire. The gift cards were provided to patients admitted under oncology, haematology, respiratory, aged care, general medical and surgical units. Of those that used the gift card, 85% reported that it improved their stay at the Northern Hospital.

**Conclusion:** This project highlights that providing a gift card to a patient improved their stay at the Northern hospital. It is not known whether using this card improves nutrition intake and needs to be further explored. This project aligns with National Quality Standards including Standard 5 Comprehensive Care and with Standard 2 Partnering with Consumers.

**Contact Author:** Tina Aboltins - tinaapd@gmail.com

**ID: 10 | Defining healthy and environmentally sustainable diet-related practices to support evidence-based policy action**

Liza Barbour<sup>1</sup>, Julie Woods<sup>2</sup>, Julie Brimblecombe<sup>1</sup>  
<sup>1</sup>Monash University, <sup>2</sup>Deakin University

**Background:** Transformation of our food system is critical to meet global sustainable development targets and to nourish future generations within planetary boundaries. This requires a shift in population-level diets to trigger systems change across all phases of the food supply chain from farm to fork and beyond.

**Aim:** To create a comprehensive list of specific healthy and environmentally sustainable diet-related practices, to support evidence-based policy action at all levels of government.

**Methods:** Relevant United Nations agencies and high-level committees were identified and their publications reviewed for eligibility. Eight publications met inclusion criteria, whereby they were published after the Food and Agriculture Organisation's landmark definition of healthy and sustainable diets in 2012 and described specific diet-related practices linked to both health and environmental sustainability outcomes. Each publication was reviewed to develop a list of desired diet-related practices commonly reported and to refine the language and evidence to support each practice.

**Results:** Thirteen specific diet-related practices were identified. These recommendations were categorised to inform populations and policy-makers about (i) how to source food, (ii) what foods to consume and (iii) how best to consume food to promote both human and planetary health.

**Conclusion:** These diet-related practices can help inform consumption practices globally. To effectively shift population-level diets, policy-makers at all levels of government must target these healthy and sustainable diet-related practices.

**Contact Author:** Liza Barbour - Liza.Barbour@monash.edu

**ID: 150 | Working as a registered dietitian in America: Similarities, differences, and take-home lessons for Australian dietitians**

Lisa Barker<sup>1</sup>  
<sup>1</sup>Monash University

**Background:** Despite very similar training, most overseas qualified dietitians are not able to gain registration

to practice in the USA. This makes collaboration and skill sharing difficult, as there is a lack of opportunity to see the advantages in practice each country offers.

**Aim:** To share personal experience working as a registered dietitian in a high acuity tertiary teaching hospital in California and to prompt discussion for changes in some aspects of dietetic training and practice in both Australia and America.

**Methods:** Drawing on over two years of personal experience working in the USA, from gaining registration to working as a registered dietitian, this work will share similarities and differences between practice in both countries, including registration, student training and clinical practice.

**Results:** The registration exam took the onus off educators and supervisors and placed it back on the student to show necessary knowledge for practice. Taking more of a consultant approach to dietetic care, dietitians were extremely knowledgeable and highly respected members of the health care team. Dietetic assistants allow for greater workforce flexibility. Student placement experience was longer, offered at the completion of academic learning, and with greater autonomy.

**Conclusion:** As an experienced Australian clinician, working in the USA has challenged some aspects of my usual practice for the better, notably taking a more consultative approach. By working together, dietitians from both countries can share knowledge and experience to improve practice. Collaborative research to quantitatively and qualitatively measure differences is warranted.

**Contact Author:** Lisa Barker - lisa.barker@monash.edu

### ID: 100 | Diet quality of Australians aged 55 and over living with rheumatoid conditions: A case-control study

Ashlee Brient<sup>1</sup>, Fabiola Hamadian<sup>1</sup>, Nathan D'Cunha<sup>1</sup>, Brittany Harriden<sup>1</sup>, Elizabeth Low<sup>1</sup>, Jane Kellett<sup>1</sup>, Ekavi Georgousopoulou<sup>2</sup>, Stephen Isbel<sup>1</sup>, Rebecca Davey<sup>3</sup>, Duane Mellor<sup>4</sup>, Nenad Naumovski<sup>1</sup>

<sup>1</sup>University of Canberra, <sup>2</sup>University of Notre Dame,

<sup>3</sup>Arthritis ACT, <sup>4</sup>Aston University

**Background:** Rheumatoid conditions (RC) refer to a class of progressive conditions associated with pain and inflammation which affect 4 million Australians. Diet is one of several modifiable risk factors which can contribute to improving quality of life.

**Aim:** To investigate potential relationships and associations between the Dietary Inflammatory Index (DII) scores of individuals living with RC and healthy community-dwelling participants.

**Methods:** This was a cross-sectional, age and gender-matched case-control study. The healthy community-dwelling participants were recruited from the Australian Capital Territory (ACT) region, while RC participants were recruited from the Arthritis ACT database. Dietary information was obtained using a validated FFQ, and DII was calculated following published literature.

**Results:** In total, 92 participants were recruited (65.2 ± 6.7 years) with 46 community-dwelling (female = 41; age = 65.2 ± 6.7) and 46 with RC (female = 41; age = 65.2 ± 6.8). There were no significant differences in DII scores ( $P > .05$ ) between the RC (-2.0 ± 1.1) and community dwelling group (-2.3 ± 1.0). Higher intake of carbohydrates (221.9 ± 67.5 g;  $P = .001$ ) and saturated fat (31.9 ± 9.8 g;  $P < .05$ ) were observed in the RC group, while control participants consumed more alcohol (12.1 ± 15.8 g;  $P < .05$ ).

**Conclusion:** Although there was no difference in DII between groups, individuals with RC consumed higher amounts of carbohydrates and saturated fat, but less alcohol. Further research is needed in individuals with RC at different stages of diagnosis to establish the link between diet and onset of RC.

**Contact Author:** Ashlee Brient - u3210847@uni.canberra.edu.au

### ID: 149 | What is possible for food service continuity during the COVID-19 pandemic? – Planning, contingencies and diversification

Jacinta Bryce<sup>1</sup>, Susan Davis<sup>2</sup>, Sarah Cooper<sup>1</sup>, Andrew Slattery<sup>1</sup>, Andreas Seibold<sup>1</sup>, Suzi Vrbat<sup>1</sup>, Sarah Hill<sup>1</sup>, Sanjay Prasad<sup>1</sup>, Daniel Farias<sup>1</sup>, Rodney Rosewarn<sup>1</sup>  
<sup>1</sup>Canberra Health Services, <sup>2</sup>Acute Allied Health Services, The Canberra Hospital

**Background:** Evidence for pandemic preparedness in food services is limited. COVID-19 prompted planning for continuous provision of food and nutrition in a large public hospital serving over 2000 meals daily, accounting for potentially reduced staffing, increased admissions and interrupted supply chains.

**Aim:** To offer an alternate food service model for inpatients and staff; to develop meals which met nutrition standards, required reduced labour and could be sourced from multiple suppliers.

**Methods:** Nutrition and Food Services (FS) considered all COVID response stages across: Staff workflows, food supply, menu innovation and meal delivery. We introduced staggered shifts/breaks and masks where physical distancing was not possible. Portion-control items replaced labour intensive in-house production and new

freezers were installed to store frozen meals sourced from several suppliers before commencing production in-house. The menu was reduced to provide default selections only and all frozen meals analysed to assess compliance with nutrition standards and coded to therapeutic diets in FS systems. Food delivery processes were transformed on the COVID ward with trolleys left outside wards for meal distribution by clinical staff. Staff meals were provided to reduce movement and disposable tableware provision was automated. Non-modifiable factors present in FS included suboptimal ventilation and confined spaces with limited opportunity for physical distancing.

**Conclusion:** Contingencies were planned and successfully undertaken to introduce a reduced menu of frozen meals that could be prepared with existing facilities and support staff physical distancing and infection control measures. Ultimately all vulnerable patients received high quality, uninterrupted food and nutrition.

**Contact Author:** Jacinta Bryce - jacinta.bryce@act.gov.au

### ID: 131 | What happens to diet quality after Australians are newly diagnosed with type 2 diabetes?

Emily Burch<sup>1</sup>, Lauren Ball<sup>1</sup>, Lauren Williams<sup>1</sup>  
<sup>1</sup>Griffith University

**Background:** Diet quality plays an important role in the prevention of diabetes-related complications in people with type 2 diabetes. However, evidence is scarce on how diet quality typically changes over time after diagnosis.

**Aim:** To describe how diet quality of individuals newly diagnosed with type 2 diabetes changed over a 12-month period and to identify factors associated with diet quality changes.

**Methods:** A 12-month prospective, observational case-series study was undertaken. Two-hundred and twenty-five Australian adults (56% men) newly diagnosed with type 2 diabetes were recruited from the Diabetes Australia national database. Participants completed five interviewer-administered surveys over 12-months: baseline, 3, 6, 9, and 12 months. Demographic, physical and health characteristics and dietary intake data were collected at each time point. Diet quality was assessed using the Dietary Approaches to Stop Hypertension (DASH) scoring tool. To assess changes in DASH, energy, fruit and vegetable intake over time, repeated measure analyses of variance were used. Multivariate repeated measures models investigated characteristics associated with these dietary changes.

**Results:** The mean DASH score of the sample remained stable at 24.0 across the 12-months. Very few participants (6.8%) improved diet quality consistently across the study

period. No associations between DASH, energy, fruit or vegetable intake over time and characteristics were observed.

**Conclusion:** This observational study suggests that without dedicated interventions (the natural course), most people newly diagnosed with type 2 diabetes will not achieve meaningful diet quality change. The development of cost-effective interventions to achieve sustained diet quality change early after diagnosis are warranted.

**Contact Author:** Lauren Ball - l.ball@griffith.edu.au

### ID: 203 | Evaluating the impacts of goal setting on diet quality improvement in chronic kidney disease

Chi Hang Chan<sup>1</sup>, Marguerite Conley<sup>2</sup>, Marina Reeves<sup>3</sup>, Katrina Campbell<sup>4</sup>, Jaimon Kelly<sup>5</sup>

<sup>1</sup>Bond University, <sup>2</sup>Princess Alexandra Hospital,

<sup>3</sup>University of Queensland, <sup>4</sup>Metro North Hospital and Health Service, <sup>5</sup>Griffith University

**Background:** Improving diet quality is an important strategy in chronic kidney disease (CKD) self-management. However, this is difficult to achieve due to many competing dietary recommendations. Patient-generated goal setting promotes behaviour changes, yet its role in improving diet quality has not been investigated in CKD.

**Aim:** To evaluate the impacts of dietary goal setting on diet quality improvement in stage 3 to 4 CKD.

**Methods:** Forty-one participants completed a six-month dietitian-led telehealth (combined phone coaching and text-message) program. Participants were asked to set up to two diet-related goals and received weekly goal tracking text messages throughout the study. Diet quality was reported using the Alternate Healthy Eating Index (AHEI) - 2010, which was evaluated using the Australian Eating Survey at baseline, 3-, and 6-months. Comparisons were made between intervention participants who did and did not set each dietary goal.

**Results:** Significant improvements were observed in AHEI (+6.9 points; 95% CI [1.2, 12.7]), vegetable (+1.1 serves; 95% CI [0.0, 2.3]) and fibre intake (+4.2 g; 95% CI [0.2, 8.2]) at three-months in participants setting a 'fruit and/or vegetable intake' dietary goal, compared to those who did not. No statistically significant or clinically meaningful changes were found at 6-months. No other dietary goal had an effect on improving diet quality.

**Conclusion:** Patient-generated goal setting which focused on improving fruit and vegetable intake, significantly improved AHEI, vegetable and fibre intake following a three-month telehealth coaching program. More support may be required to achieve longer-term behavioural and diet quality changes in stage 3 to 4 CKD patients.

**Contact Author:** Chi Hang Chan - ianchan1230@gmail.com

### ID: 8 | Plate wastage and patient satisfaction post transition from Buckeye to CBORD food management systems

Caroline Calkin<sup>1</sup>, Aranka Nenov<sup>1</sup>, Karon Markovski<sup>1</sup>, Kathryn Marshall<sup>1</sup>

<sup>1</sup>Western Health

**Background:** In May 2019 Western Health transitioned from Buckeye to CBORD food management system. CBORD includes electronic bedside meal ordering (EBMOS) which enables patients to select their meals closer to the time of consumption.

**Aim:** To assess changes in plate wastage and patient satisfaction post transition from Buckeye to CBORD food management system at Footscray Hospital.

**Methods:** Plate wastage was calculated using a validated visual plate wastage method. A validated questionnaire was completed looking at patient satisfaction and food access. Data collection was completed in 2018 Buckeye/pre EBMOS by Latrobe University student dietitians and in 2019 CBORD/post EBMOS by Deakin University student dietitians. Data analysis was completed using Excel and Jamovi.

**Results:** In total, 202 meal trays were audited in 2018 and 256 in 2019. A non-significant reduction in plate wastage was seen across the 3 main meals (36% vs 34%). A significant reduction in plate wastage was seen at dinner time (40% vs 31%  $P = .032$ ). Some improvement in patient satisfaction was seen with CBORD including more patients reporting that they received the food that they had ordered (85% vs 95%) and less visitors bringing in food for patients because the patients were hungry (25% vs 12%). Results from the patient satisfaction and food access questionnaire remained similar.

**Conclusion:** A significant reduction in plate wastage was seen at dinner post transition to CBORD/introduction of EBMOS. This may be attributed to patients placing meal orders on the day of consumption. Results from the patient satisfaction and food access questionnaire remained similar.

**Contact Author:** Caroline Calkin - carolinecalkin@yahoo.com.au

### ID: 55 | Early post-operative feeding following surgery for upper gastrointestinal cancer: A systematic review

Lauren Carmichael<sup>1</sup>, Rose Rocca<sup>2</sup>, Erin Laing<sup>1</sup>, Phoebe Ashford<sup>1</sup>, Jesse Collins<sup>1</sup>, Luke Jackson<sup>1</sup>, Lauren McPherson<sup>1</sup>, Brydie Perndergast<sup>1</sup>, Nicole Kiss<sup>1</sup>

<sup>1</sup>Deakin University, <sup>2</sup>Peter MacCallum Cancer Centre

**Background:** Nutrition management post major upper gastrointestinal (UGI) cancer surgery is known to affect post-operative recovery and ability to tolerate adjuvant treatment. This systematic review assessed the effect of early oral feeding (EOF), compared to traditional timing of oral feeding, following major surgery for UGI cancer on post-operative complications, post-operative length of hospital stay (LOS), nutritional status, and quality of life (QOL).

**Methods:** The literature was searched up until 9 March 2020 using CINAL, PubMed, MEDLINE, Embase, Scopus and Web of Science databases. Quality assessment was completed using the Academy of Nutrition and Dietetics quality criteria checklist.

**Results:** A total of fifteen articles were included, consisting of seven randomised controlled trials, six cohort studies and two non-randomised trials with a total of 2,517 participants. The type and timing of EOF varied considerably across studies with limited reporting of energy and protein intake from oral or enteral feeding. Fourteen studies assessed post-operative complications of which thirteen reported no difference between EOF and standard care. Fourteen studies assessed post-operative LOS and of these, thirteen reported a reduced length of stay in the EOF group. Four of fifteen studies assessing nutritional status found no difference between groups. Three of fifteen studies assessed quality of life with inconsistent findings.

**Conclusion:** This review found EOF reduced post-operative LOS and did not increase post-operative complications. However, the optimal timing for the introduction of EOF could not be established. Furthermore, the type of EOF varied considerably making comparison across studies challenging with a need for internationally standardised definitions.

**Contact Author:** Nicole Kiss - nicole.kiss@deakin.edu.au

### ID: 165 | How appropriate and valid are diet quality index tools for use in Australian contexts? A systematic review

Ho Ching Cheung<sup>1</sup>, Mui Siew Tan<sup>1</sup>, Erynn McAuley<sup>1</sup>, Lynda Ross<sup>1,2</sup>, Helen MacLaughlin<sup>1,3</sup>

<sup>1</sup>Queensland University of Technology, <sup>2</sup>Griffith University, <sup>3</sup>Royal Brisbane and Women's Hospital

**Background:** Diet quality indices (DQIs) are tools used to evaluate the overall diet quality of populations and intervention groups against dietary guidelines or known healthy dietary patterns.

**Aim:** To evaluate DQIs and their validation processes to facilitate decision-making in the selection of appropriate DQIs for use in Australian contexts.

**Methods:** A search of CINAHL, PubMed and Scopus electronic databases was conducted for studies published between January 2010 and May 2020, that used a validated DQI, measured >1 dimension of diet quality and was applicable to the Australian context. Data on constructs, scoring, weighting and validation frameworks were extracted and summarised. The quality of the validation process was evaluated using COSMIN Risk of Bias and Joanna Briggs Appraisal checklists.

**Results:** The review identified 27 indices measuring adherence to: national dietary guidelines (n = 13), Mediterranean diet (n = 8), disease-specific diets (n = 4), and two indices were for older adults. Extensiveness of the validation process varied widely across and within categories. Construct validity was the most strongly assessed measurement property, while evidence regarding measurement error was frequently inadequate. The majority of DQIs did not capture overall macronutrient balance, however demonstrated a U-shaped relationship with foods.

**Conclusion:** DQIs should capture multiple dimensions of diet quality, possess a reliable weighting and scoring system, and demonstrate adequate evidence in their validation framework to support use in the intended context. When using DQIs, researchers need to understand the limitations DQI's and interpret their results with care. Future research on DQIs is indicated to improve evaluation of measurement error, external validity and reliability.

**Contact Author:** Lynda Ross - l20.ross@qut.edu.au

### ID: 20 | Examining barriers to attendance at postnatal gestational diabetes mellitus (GDM) dietetic services

Kit Ling Chu<sup>1</sup>, Smita Nambiar-Mann<sup>1</sup>, Emily Gill<sup>2</sup>, Taylor Guthrie<sup>3</sup>, Susan de Jersey<sup>1</sup>

<sup>1</sup>Queensland University of Technology, <sup>2</sup>QUT Health Clinics, <sup>3</sup>Royal Brisbane and Womens Hospital

**Background:** Women with previous gestational diabetes mellitus (GDM) have a 7-fold higher risk of developing type 2 diabetes (T2DM). The poor uptake and attendance of women at postnatal follow up services aiming to prevent T2DM is a concern.

**Aim:** To identify the barriers to attending postnatal services among women with recent GDM, their preferred service delivery methods and their perceived importance of postnatal lifestyle intervention for the prevention of T2DM.

**Methods:** Women who were referred to a university postnatal clinic by dietitians at a public hospital, but did not attend the services were invited to complete an online survey (n = 220).

**Results:** Twenty-six women responded (mean age of 31 years, 65% were 6-months post-partum), of which 46% did not remember being referred to post-natal services. Only 14 (54%) respondents wished to access postnatal services. Prioritising children's healthcare needs and having difficulty to juggling the demands of parenthood were major barriers to attending postnatal services. Women preferred a smartphone program or a face-to-face individual appointment their partner and children could attend that commenced after six months postnatal. Women with greater risk perception of diabetes and lower self-efficacy in healthy eating and physical activity were more likely to be interested in postnatal services.

**Conclusion:** One strategy to increase attendance at postnatal services may be to meet the dietitians involved in their postnatal care, antenatally, for better continuity of care. Postnatal services engagement may improve with a codesign approach, where women at risk can be involved in designing flexible and accessible postnatal services.

**Contact Author:** Kit Ling Chu - jodie.chu@hotmail.com

### ID: 79 | No control and overwhelming cravings: Australian adults' perspectives on the experience of food addiction

Rebecca Collins<sup>1</sup>, Kirsti Haracz<sup>1</sup>, Mark Leary<sup>1</sup>, Megan Rollo<sup>1</sup>, Tracy Burrows<sup>1</sup>

<sup>1</sup>University of Newcastle

**Background:** Food addiction research is continuing to increase with recent reviews suggesting that food addiction is a distinctive condition that has many symptoms similar to substance use disorders.

**Aim:** To explore the perspectives and experiences of Australian adults seeking treatment for addictive eating.

**Methods:** Quantitative data for this study were collected via self-report questionnaires completed online, including demographics, the Yale Food Addiction Scale 2.0, and the Depression, Anxiety, and Stress Scale-21. Qualitative data were collected via semi-structured interviews using open-ended questions about the individual experience of food addiction and perspectives regarding intervention and recovery.

**Results:** Interview data were available for 34 participants, with the majority (n = 33) being females who were overweight, (mean  $\pm$  SD age = 42.9  $\pm$  13.2 years, BMI = 36.5  $\pm$  6.8 kg/m<sup>2</sup>). Stress (19.9  $\pm$  11.4 out of 21) and depression (16.8  $\pm$  10.2 out of 21) were the most prominent



negative emotional states. Thematic analysis identified two themes of compulsion and control. Compulsion distinguished the participants' experiences related to addictive eating behaviours, in particular the notion of craving. Control encompassed their perception of both the processes and outcomes of overcoming their addictive eating. The relationships between these two themes and their influence on each other were observable.

**Conclusion:** This study provides a unique contribution to understanding adults' experience of food addiction by highlighting the strong desire to be in control of eating behaviours, and the inability of participants to overcome their compulsions to eat specific food despite minimal anticipation of positive effect.

**Contact Author:** Rebecca Collins - Rebecca.Collins10@uon.edu.au

### ID: 178 | Dietary assessment methods in military and veteran populations: A scoping review

Rebecca Collins<sup>1</sup>, Bradley Baker<sup>2</sup>, Daisy Coyle<sup>1</sup>, Megan Rollo<sup>1</sup>, Tracy Burrows<sup>1</sup>

<sup>1</sup>University of Newcastle, <sup>2</sup>Defence Science and Technology Group

**Background:** Optimal dietary intake is important for the health and performance of military personnel. For military veterans, the complex nature of transition into civilian life and sub-optimal dietary intake can lead to the increased burden of disease.

**Aim:** To determine what is known about the assessment and reporting of dietary intakes within both populations, and to determine if studies reporting on the dietary intake of military personnel or veterans include comparisons with dietary guidelines.

**Methods:** Six databases were searched to identify papers published from the database inception to April 2019. Studies were included if they assessed and reported whole dietary intake data, reported exclusively on military or veteran population, and included only healthy populations.

**Results:** A total of 89 studies were included. The majority of studies used one dietary assessment method (n = 76, 85%). The most frequent methodology was food frequency questionnaires (FFQ) (n = 40, 45%) followed by 24-hour recalls (n = 8, 9%). The main dietary outcomes reported were macronutrients: carbohydrate, protein, fat, and alcohol (n = 66, 74%) with total energy intake reported in n = 59 (66%). Fifty four (61%) studies reported a comparison with country-specific dietary guidelines and 14 (16%)

reported a comparison with the country-specific military guidelines.

**Conclusion:** Dietary intake in military settings is most commonly assessed via FFQs and 24-hour recalls. Dietary intake reporting is focused around intakes of energy and macronutrients. Most studies compare against dietary guidelines, however, comparison to specific military dietary guidelines is minimal.

**Contact Author:** Rebecca Collins - Rebecca.Collins10@uon.edu.au

### ID: 107 | A systematic review of hospital food waste audit methods: Development of a consensus tool

Nathan Cook<sup>1</sup>, Jorja Collins<sup>2</sup>, Denise Goodwin<sup>1</sup>, Judi Porter<sup>3</sup>

<sup>1</sup>Monash University, <sup>2</sup>Eastern Health, <sup>3</sup>Deakin University

**Background:** To understand, monitor and compare the scope of food waste in hospital foodservices, it is essential to measure food waste using a standardised method, however no such guidelines exist.

**Aim:** To collate aggregate hospital food and food related waste audit methods, and to develop a consensus tool.

**Methods:** A systematic review was undertaken. Seven electronic databases were searched for peer reviewed literature and 17 Google Advanced searches located grey literature that described food waste audit methods previously used or developed for hospital foodservices. Study selection and quality assessment occurred in duplicate. Data describing the audit method, its feasibility and strengths and limitations were extracted and synthesised by authors to develop the consensus tool.

**Results:** Eight peer reviewed and nine grey literature documents describing a variety of food waste audit methods were included. The most common practices were: two week data collection (n = 5); staff collecting data (n = 6); measuring food waste only (n = 11); measuring food waste at main meals (n = 5); and using electronic scales to measure waste (n = 12). A consensus tool was developed that proposes a preferred approach for preparing, conducting and analysing data from a food waste audit.

**Conclusion:** This research used published evidence to develop the first ever consensus tool to be used by nutrition and foodservice professionals to conduct a food waste audit in a hospital setting. This will provide opportunities for research and quality improvement to measure and address the hospital food waste problem.

**Contact Author:** Nathan Cook - nathan.cook@monash.edu

**ID: 66 | Exploring patients' mid-meal snack intake and their perceptions of the service: A cross-sectional observational study**

Amanda Corneal<sup>1</sup>, Judith Tweedie<sup>2</sup>, Fiona Pelly<sup>2</sup>, Susan Tench<sup>3</sup>, Gai Moritz<sup>1</sup>

<sup>1</sup>Queensland Health, <sup>2</sup>University of the Sunshine Coast, <sup>3</sup>Townsville Hospital and Health Service

**Background:** Self-select mid-meals provide high energy/high protein snacks to nutritionally vulnerable patients.

**Aim:** To describe patients' estimated intake of snacks selected from a self-select mid-meal service and explore attitudes towards the service.

**Methods:** A self-select mid-meal service offering 35 to 64 items was evaluated in two Queensland Health services. The types and proportion of snacks consumed by adult inpatients prescribed the mid-meal service was determined using a visual estimation method. Patient characteristics were obtained from electronic medical records. The reasons for declining, not receiving or not consuming all of the snacks and patient understanding of the purpose of the service were recorded. Self-rating of health, appetite, and attitudes towards the service items were also collected via a survey.

**Results:** Estimated intake data were collected from 36 participants with a range of clinical conditions, with 31 completing the survey. A total of 44% of participants received an item from the mid-meal service, with an average of 62% consumed. The primary reason for declining or not consuming was a lack of hunger/appetite, and not receiving an item was due to unavailability of the patient. Savoury snacks were the most popular with >65% consumed. Most participants (94%) agreed/strongly agreed that they understood the purpose of the service in meeting their health needs.

**Conclusion:** Participants' attitudes towards the self-select mid-meal service were positive, yet there was variable use of the service. Further investigation of how a self-select mid-meal service can be personalised to provide patient-centred care to nutritionally vulnerable patients is warranted.

**Contact Author:** Amanda Corneal - amandagrants-holt.dietitian@outlook.com

**ID: 85 | Nutritional implications of pelvic radiotherapy in patients with gynaecological cancers: A retrospective observational study**

Emilie Croisier<sup>1,2</sup>, Alana Morrissy<sup>2</sup>, Teresa Brown<sup>1</sup>, Alice Grigg<sup>1</sup>, Philip Chan<sup>1</sup>, Jeffrey Goh<sup>1</sup>, Judy Bauer<sup>2,3</sup>

<sup>1</sup>Royal Brisbane and Women's Hospital, <sup>2</sup>University of Queensland, <sup>3</sup>Dietitians Australia

**Background:** The impact of radiotherapy treatment on nutritional status in patients with head and neck cancer or gastrointestinal cancer is well known. However there is scarcity of research on the nutritional implications in patients with gynaecological cancers with current nutrition guidelines not specific to this population.

**Aim:** To determine current dietetic practice for patients with gynaecological cancers receiving pelvic radiotherapy and to identify nutrition impact symptom (NIS) and nutrition outcomes during treatment and for 6 months post treatment.

**Methods:** All patients with gynaecological cancer receiving pelvic radiotherapy at a tertiary hospital (January 2017-December 2018) were included (n = 104). Data were collected retrospectively from the Radiation Oncology treatment database (MOSIAQ) and electronic medical records. Key outcomes were clinically significant weight change ( $\pm 5\%$  body-weight change), NIS prevalence and model of nutrition care.

**Results:** A third of patients (29.2%) deemed at nutritional risk (due to documented weight loss and poor appetite) were either not nutritionally screened or screened incorrectly during week 1 of treatment. Clinically significant weight loss during treatment was experienced by 19.2% of patients and occurred in 14.8% of patients 0 to 6 weeks post-treatment. Diarrhoea (53%), fatigue (68%), nausea (48%), and pain (41%) were frequently reported throughout treatment. Overall 40 patients were referred to a dietitian; of which 25 had a completed nutritional assessment and 14 of these (56%) were moderately or severely malnourished.

**Conclusion:** These results demonstrate a valid need for specialised dietetics services in this patient cohort due to prevalence of weight loss, NIS and malnutrition experienced during and post treatment.

**Contact Author:** Emilie Croisier - emilie.croisier@uqconnect.edu.au

**ID: 29 | A systematic review of the effect of preoperative nutrition support on nutritional status and treatment outcomes in upper gastrointestinal cancer resection**

Irene Deftereos<sup>1,2</sup>, Nicole Kiss<sup>3</sup>, Elizabeth Isenring<sup>4</sup>, Vanessa Carter<sup>1</sup>, Justin Yeung<sup>2</sup>

<sup>1</sup>Western Health, <sup>2</sup>University of Melbourne, <sup>3</sup>Deakin University, <sup>4</sup>Bond University

**Background:** Malnutrition is highly prevalent in patients with Gastrointestinal (UGI) cancer and is associated with poor outcomes. However, there are no evidence-based guidelines for nutrition support specific to UGI cancer surgery.

**Aim:** To determine the effect of preoperative nutrition support on nutritional status and treatment outcomes in UGI cancer.

**Methods:** Six databases were systematically searched. Abstracts of studies investigating the effect of preoperative nutrition support on nutritional status, functional status, body composition, quality of life and treatment outcomes in adult patients undergoing oesophageal, gastric or pancreatic cancer resection were identified. Screening, quality assessment using the Downs and Black checklist, data extraction, and appraisal of evidence using GRADE were performed by two reviewers. Due to heterogeneity of studies, results were synthesised narratively.

**Results:** Nine studies with a total of 442 oesophageal and 418 gastric patients were included. Individualised dietary counselling, and enteral feeding in neoadjuvant therapy for oesophageal cancer demonstrated positive effects for weight maintenance and surgical complications, however the GRADE evidence quality was very low. Preoperative nutrition support in gastric cancer decreased the incidence of surgical site infections, length of stay and hospital costs, but GRADE assessment was unable to be completed due to only one study reporting on each outcome measure.

**Conclusion:** This review demonstrates the lack of strong evidence to determine the most optimal methods of nutrition support prior to UGI cancer resection. Current surgical oncology guidelines should be utilised until further research from high quality trials enable the development of specific practice guidelines.

**Contact Author:** Irene Deftereos - irene.deftereos@unimelb.edu.au

#### **ID: 54 | The ability of malnutrition screening and assessment tools to identify computed tomography defined low muscle mass in colorectal cancer surgery: An exploratory study**

Aleksandra Djordjevic<sup>1</sup>, Irene Deftereos<sup>1,2</sup>, Vanessa Carter<sup>1</sup>, Stephanie Morris<sup>1</sup>, Nicole Kiss<sup>3</sup>, Justin Yeung<sup>2</sup>  
<sup>1</sup>Western Health, <sup>2</sup>University of Melbourne, <sup>3</sup>Deakin University

**Background:** Malnutrition and low muscle mass are independently associated with poor outcomes in colorectal cancer (CRC). However, tools to identify low muscle mass are limited in the clinical setting.

**Aim:** To investigate the ability of existing malnutrition screening and assessment tools to identify low muscle mass assessed by computed tomography (CT). Secondary aims were to determine the feasibility of CT analysis and handgrip strength (HGS).

**Methods:** Patients who underwent surgery for CRC between February and September 2019 were prospectively included. Nutritional screening and assessment tools were body mass index (BMI), Malnutrition Screening Tool (MST) and Patient-Generated Subjective Global Assessment (PG-SGA). Muscle mass was determined by preoperative CT image at the level of the third lumbar vertebrae (L3), and muscle strength was determined by HGS dynamometry. Fisher's exact and Mann-Whitney U tests were used to compare results of nutrition screening/assessment tools with CT muscle assessment. Feasibility of completing HGS and CT analysis were also recorded.

**Results:** A total of 57 patients were included with 18 (32%) who were at-risk of malnutrition and 10 (17%) who were malnourished. Analysable CT scans were available for 51 patients (90%) and 21 (47%) had evidence of low muscle mass. No screening or assessment tool was able to identify CT diagnosed low muscle mass. Inability to complete HGS was associated with malnutrition ( $P = .001$ ).

**Conclusion:** In this cohort, nutritional screening and assessment tools did not identify CT diagnosed low muscle mass. Feasible tools to identify low muscle mass in the clinical setting are required.

**Contact Author:** Irene Deftereos - irene.deftereos@unimelb.edu.au

#### **ID: 186 | Influence of body mass index on disability in children with Charcot-Marie-Tooth Disease**

Gabrielle Donlevy<sup>1</sup>, Sarah Garnett<sup>1</sup>, Kayla Cornett<sup>1</sup>, Marnee McKay<sup>1</sup>, Jennifer Baldwin<sup>2</sup>, Joshua Burns<sup>1</sup>, Manoj Menezes<sup>1</sup>  
<sup>1</sup>University of Sydney, <sup>2</sup>University of Newcastle

**Background:** Growth and body mass influence disability in childhood neuromuscular disorders.

**Aim:** To examine the relationship between Body Mass Index (BMI) and disability in children with Charcot-Marie-Tooth Disease (CMT).

**Methods:** We conducted a cross sectional analysis of 477 patients with CMT aged 3 to 20 years from the Inherited Neuropathies Consortium, and 316 age-and-sex matched controls from the 1000 Norms Project. BMI was categorised according to the International Obesity Task Force (IOTF), and compared with scores on the CMT Paediatric Scale (CMTPedS). ITOF categories were

collapsed into five age-and-sex equivalent BMI groups: severely underweight, underweight, healthy weight, overweight, obese.

**Results:** Compared to controls, there was a significantly higher proportion of children with CMT categorised as severely underweight (5.6% vs 0.3%), underweight (10.4% vs 5.1%), and obese (7.6 vs 3.8%) ( $P < .0001$ ), as was being obese ( $P = .015$ ).

**Conclusion:** There is a higher frequency of underweight and obese children with CMT compared to age-and-sex matched healthy children. Underweight and obese children with CMT are more disabled than children of healthy weight. A longitudinal study is required to determine the need for specific nutritional intervention to reduce the burden of CMT.

**Contact Author:** Gabrielle Donlevy - gabrielle.donlevy@health.nsw.gov.au

### ID: 35 | National survey of clinicians' antenatal care and management practices in pregnant women post bariatric surgery

Elaina Elder-Robinson<sup>1</sup>, Susan de Jersey<sup>2</sup>, Helen Porteous<sup>2</sup>, Shannon Huxtable<sup>2</sup>, Michelle Palmer<sup>2</sup>  
<sup>1</sup>Optimise Nutrition, <sup>2</sup>Queensland Health

**Background:** Increasing numbers of women are undergoing bariatric surgery (BSurg) and falling pregnant, requiring tailored pregnancy and nutrition care. It is unclear what care is currently being provided.

**Aim:** To describe clinicians' reported provision of care to pregnant women post-BSurg and its alignment with international consensus guidelines.

**Methods:** Antenatal care clinicians were invited to complete a 37-item web-based survey, which was emailed to relevant professional organisations and networks in Australia. Multidisciplinary referral, foetal growth, gestational diabetes mellitus (GDM) and micronutrient screening and management practices were assessed. Data were analysed descriptively and free-text responses summarised thematically.

**Results:** Respondents ( $n = 100$ ) were majority female (93%), dietitians (46%) and currently worked in maternity services (82%). Half (63%) managed the care of pregnant women post-BSurg at least monthly, with 94% observing and/or expecting this referral rate to increase. Referral to a dietitian was common (74%). Many respondents (43%) recommended one week of home blood glucose monitoring for GDM screening. The oral glucose tolerance test was also used frequently (42%). Half (53%) of respondents screened for micronutrient deficiencies every trimester. A pregnancy multivitamin was widely recommended (79%),

and supplementation changes with BSurg type were common (59%). Half (54%) of respondents had not used a specific guideline to direct care.

**Conclusion:** Care provision to pregnant women post-BSurg varied and may not align with current guidelines. There is an opportunity for dietitians to contribute to development of multi-disciplinary workplace management guidelines for pregnant women post-BSurg, which may assist with providing consistent evidence-based care to these high-risk women.

**Contact Author:** Elaina Elder-Robinson - eelder.rob-inson@gmail.com

### ID: 212 | A systematic review exploring stakeholder perceptions of dietetic care

Andrea Elliott<sup>1,2</sup>, Simone Gibson<sup>2</sup>  
<sup>1</sup>Eastern Health, <sup>2</sup>Monash University

**Background:** Engagement of patients in delivering health care services is an important feature of accreditation frameworks. Over the last two decades, there has been a shift in measuring performance from clinical outcomes to the patient experience. Currently, we have a limited understanding of the perceptions of patient's receiving dietetic care.

**Aim:** To explore perceptions of multiple stakeholders of dietetic care.

**Methods:** A systematic review based on a critical interpretive synthesis was conducted. Eight databases were searched for quantitative or qualitative studies conducted in any health care setting that investigated stakeholders, including health professional and patient, perceptions of dietetic care such as effectiveness and appropriateness. Study selection occurred in duplicate and a quality assessment was conducted. Data were extracted and analysed using an inductive approach. Reporting followed the Enhancing Transparency in Reporting the synthesis of Qualitative Research (ENTREQ) Framework.

**Results:** Thirty eight studies met inclusion criteria. Twenty-five explored the experiences of patients and /or carers who received dietetic care. The most dominant theme (reported in 88% studies) was the patient's desire for an individualised dietetic care approach considering their medical condition/s and personal context. The three common areas identified as requiring personalisation were counselling (68%), goal setting (40%), and written information (48%).

**Conclusion:** This novel review furthers our understanding of what aspects of dietetic care are valued by patients, emphasising the need for dietetic care to prioritise personalisation in order to meet consumer expectations. It

highlights the need for future research or QI activities to investigate patient perceptions of service.

**Contact Author:** Andrea Elliott - Andrea.Elliott@monash.edu

### ID: 116 | Body mass index (BMI) range for the older adult (>65 years): Reducing all-cause mortality

Jasmine Everist<sup>1</sup>, Helena McDonald<sup>1</sup>, Thea Moloney<sup>1</sup>  
<sup>1</sup>*Peninsula Health*

**Background:** Globally, the population of those aged over 65 years is increasing, and with aging comes a multifactorial increased vulnerability to malnutrition and associated concerns.

**Aim:** To review the literature and benchmark Victorian institutions in order to align their protocols regarding Body Mass Index (BMI) in aged persons.

**Methods:** A working group was formed, literature review undertaken and targeted benchmarking occurred with Victorian Health services and universities.

**Results:** The literature review revealed little support of the BMI range of 22 to 27 kg/m<sup>2</sup>, with eight original research articles supporting a BMI reference range of >22 to 27 kg/m<sup>2</sup>. Literature demonstrated increased mortality rates in those with BMI 30 kg/m<sup>2</sup>.

**Conclusion:** Given the evolving nature of this area of research, Peninsula Health will continue to review protocols for BMI, and would welcome Victorian Health services to consider the same.

**Contact Author:** Jasmine Everist - jeverist@phcn.vic.gov.au

### ID: 219 | The effect of citrulline supplementation on exercise performance in healthy adults: A systematic review

Leila Fathi<sup>1</sup>, Michael Leveritt<sup>1</sup>, Kimberley Anakapu<sup>1</sup>, Georgia D'Andrea<sup>1</sup>, Tiana Morrison<sup>1</sup>  
<sup>1</sup>*University of Queensland*

**Background:** Methods to achieve peak performance during competition are keenly sought by athletes and exercise scientists. There is a growing interest in the potential use of L-citrulline as a supplement to improve exercise performance. There has been extensive research on its effect on physiological markers, yet no reviews have investigated the effect of citrulline on exercise performance outcomes.

**Aim:** To conduct a systematic review of the literature describing the effects of citrulline supplementation vs

placebo on exercise performance outcomes in healthy adults.

**Methods:** A systematic search of five databases were performed to find peer-reviewed, English language, randomised control trials which evaluated the effects of citrulline supplementation in healthy adults on exercise performance outcomes. Outcomes included time to exhaustion, time trial performance, maximum number of repetitions, power output, critical velocity and reaction time. Citrulline supplementation forms included pure L-citrulline or L-citrulline D-malate, watermelon juice/extract, citrulline in a multi-nutrient pre-workout supplement and citrulline taken in conjunction with other amino acids.

**Results:** Twenty-six randomised control studies consisting of 485 independent subjects, met inclusion criteria. Overall, there was evidence from 13 studies to indicate some improvement in time to exhaustion, time trial, repetitions to fatigue and critical velocity measures, with little to no effect for other performance outcomes.

**Conclusion:** Citrulline supplementation may improve exercise performance outcomes, however, the large variation in supplement dosage and protocols makes evidence difficult to interpret. Further research with more consistent methodology is encouraged to investigate its efficacy.

**Contact Author:** Leila Fathi - l.fathi@uq.net.au

### ID: 167 | Rural darling downs antenatal nutrition services audit

Berneice Fitzpatrick<sup>2</sup>, Tessa Funk<sup>4</sup>, Paul Jones<sup>1</sup>, Louise Moodie<sup>3</sup>

<sup>1</sup>*Darling Downs Health, Queensland*, <sup>2</sup>*Darling Downs Health*, <sup>3</sup>*Mackay Hospital and Health Service*, <sup>4</sup>*The University of Queensland*

**Background:** Gestational Diabetes Mellitus (GDM), excessive gestational weight gain (GWG) and overweight and obesity in pregnancy are increasing in prevalence and presenting a significant health issue for pregnant women. These risk factors in pregnancy increase the rate of adverse birth events and chronic health conditions for the infant in the future. Nutrition education and counselling is an effective strategy to improve nutrition related maternal health outcomes.

**Aim:** To assess whether antenatal dietetic services were being delivered in line with best practice guidelines and look for opportunities to improve patient care.

**Methods:** A retrospective chart audit was undertaken (n = 300) of antenatal patients across rural health services of Darling Downs Health. Data were collected on nutrition related outcomes; GDM Status, BMI, GWG, referral

rate, service mode, monitoring and follow up. Additionally, stakeholders were interviewed regarding barriers and limitations to providing nutrition services.

**Results:** Prevalence of GDM (22.9% vs 8%-12%), overweight and obesity (54.8% vs 30%-50%) was higher than state average. Low referral rate 75% with GDM and 38.2% overweight and obese and low attendance rate 58% and 60.3% respectively; GWG targets achieved by 28% of women. Interviews found multidisciplinary team unaware of guidelines and post-natal follow up recommendations. Room availability, outreach schedules, women's values, attitudes, health literacy and socioeconomic status were identified as barriers to engagement.

**Conclusion:** Recommendations for service improvement were developed. Student placement was utilised to disseminate findings. Strategies such as telehealth, online services and enhancing existing groups were highlighted for the next stage.

**Contact Author:** Paul Jones - paul.jones@health.qld.gov.au

#### **ID: 134 | Evaluating the bariatric dietetic service at a public tertiary hospital**

Jennifer Flanagan<sup>1</sup>, Anna Cardamis<sup>1</sup>, Lina Breik<sup>1,2</sup>

<sup>1</sup>Eastern Health, <sup>2</sup>Tube Dietitian

**Background:** Dietitians play a vital role in bariatric surgery patient outcomes. Adequate pre-surgery nutrition education and post-surgery dietetic follow-up are known to decrease hospital re-admissions after surgery and improve weight loss outcomes. The 2020 National Framework for Public Bariatric Surgery recommends that all patients have dietary counselling pre-surgery and review within two to eight weeks post-surgery.

**Aim:** To evaluate the current bariatric dietetic service at a large metropolitan hospital compared to guidelines.

**Methods:** A retrospective medical record audit was conducted on a random selection of patients admitted to the intensive care unit post bariatric surgery in 2019. Patient demographic data and dietitian encounters were collected. Descriptive analysis was used to characterise the patient population and descriptive statistics completed to determine frequency of dietetic services.

**Results:** Thirty-five patients were audited (63% female with an average body mass index of 56.9 kg/m<sup>2</sup>). Findings include: 100% of patients were seen by dietetics in preadmission clinic for education on the pre- and post-surgery diet, 6% on the ward during surgery admission, only 11% in clinic within the recommended eight weeks post-surgery, 14% within two to six months post-surgery and 66% of patients were not seen post-surgery.

**Conclusion:** The audit shows all patients were seen by dietetics pre-surgery however, poor post-surgical dietetic follow up is evident. This poor follow-up could result in higher risk of micronutrient deficiencies and poorer weight loss outcomes. Further investigation is required to determine how to improve service delivery to match guidelines.

**Contact Author:** Jennifer Flanagan - jen.c.flanagan@gmail.com

#### **ID: 155 | Effectiveness of Foodbank WA's Food Sensations® for adults food literacy program in regional Australia**

Frances Foulkes-Taylor<sup>1</sup>, Catherine Dumont<sup>1</sup>, Lucy Butcher<sup>1</sup>, Andrea Begley<sup>2</sup>

<sup>1</sup>Foodbank WA, <sup>2</sup>Curtin University

**Background:** In the last 20 years, Foodbank WA has been involved in the delivery of food literacy programs, specifically Food Sensations for Adults, funded by the Western Australian Department of Health. Food Sensations for Adults is a four-week nutrition education and cooking program, with demonstrated success in improving food literacy skills amongst disadvantaged Western Australians. Over the last two years, 25% of programs have been delivered in regional and remote Western Australia.

**Aim:** To identify the impact of Food Sensations for Adults in regional and remote Western Australia.

**Methods:** All participants answered validated pre- and post- questionnaires to evaluate the socio-demographic characteristics and change in food literacy behaviours (plan and manage, selection, and preparation domains) resulting from the program.

**Results:** Regional participants (n = 451) were more likely to be of Aboriginal descent, live in low income areas, and have lower education levels, than metropolitan participants (n = 1398). Regional participants had statistically higher food literacy behaviours in the three domains at baseline than metropolitan participants, and significant improvements were achieved during the program. Post program, regional participants matched metropolitan participants in the plan and manage, and preparation domains. Regional food selection behaviours results were lower than for metropolitan participants ( $P < .001$ ).

**Conclusion:** Food Sensations for Adults demonstrates effective behaviour change in regional participants, however the higher level of disadvantage experienced by this population highlights the need for increased investment from state and local governments in addressing regional

specific barriers, such as inflated food costs, to support food literacy programs.

**Contact Author:** Frances Foulkes-Taylor - frances.foulkes-taylor@foodbankwa.org.au

#### **ID: 44 | Breakfast cereal: Where innovation meets renovation, and the result is more whole grain**

Sara Grafenauer<sup>1</sup>, Jaimee Hughes<sup>1</sup>, Emilie Croisier<sup>2,3</sup>, Stephanie Duncombe<sup>3</sup>

<sup>1</sup>Grains & Legumes Nutrition Council, <sup>2</sup>Royal Brisbane and Women's Hospital, <sup>3</sup>University of Queensland

**Background:** Breakfast cereal improves overall diet quality yet is under constant scrutiny with assertions it has not changed over time.

**Aim:** To comprehensively analyse the nutrition composition and health claims across eight sub-categories of breakfast cereal at four time points (2013, 2015, 2018, 2020).

**Methods:** An audit of products from four major supermarkets in metropolitan Sydney (Aldi, Coles, IGA, and Woolworths) collected ingredients, nutrition information, claims and HSR for biscuits and bites; brans; bubbles, puffs, and flakes; granola and clusters; hot cereal flavoured; hot cereal plain; muesli; breakfast biscuits. The median (IQR) were calculated for energy, protein, fat, saturated fat, carbohydrate, sugars, dietary fibre and sodium. Comparisons over time by sub-category and common products available from 2013 and 2020 were compared.

**Results:** Product numbers almost doubled ( $n = 283$  vs  $n = 543$ ) led by granola and clusters. Whole grain cereals  $\geq 8$  g/serve made up 67% of products. Notable changes were in the nutrition composition of cereals marketed as the same product in 2013 and 2020 ( $n = 134$ ); with decreases in mean carbohydrate (2%), sugar (10%) and sodium (16%) ( $P < .001$ ), while protein and total fat increased significantly ( $P = .036$ ;  $P = .021$ ). Dietary fibre and whole grain claims doubled and lead the category ahead of Plant-based claims.

**Conclusion:** Use of defined sub-categories and products common to both timeframes provided a clear analysis of change within the category, a result of reformulation which pre-dates this analysis. Whole grain cereals were lower in the two target nutrients, sodium and sugars, and now make up more than half of the category.

**Contact Author:** Sara Grafenauer - sarag@glnc.org.au

#### **ID: 4 | A dietitian-led model can achieve weight loss to facilitate elective surgery for obese adults**

Sally Griffin<sup>1,2</sup>, Lynda Ross<sup>2,3</sup>, Matthew Burstow<sup>4</sup>, Ben Desbrow<sup>3</sup>, Michelle Palmer<sup>1</sup>

<sup>1</sup>Queensland Health, <sup>2</sup>Queensland University of Technology, <sup>3</sup>Griffith University, <sup>4</sup>Logan Hospital

**Background:** Obese elective surgery patients have significantly higher risk of surgical complications. The dietitian-led preoperative Very Low Calorie Diet (VLCD) Clinic was established to support obese patients who require weight loss for elective non-bariatric surgery to proceed.

**Aim:** To evaluate the efficacy of a dietitian-led VLCD-based model of care with respect to achieving weight loss for obese patients prior to surgery.

**Methods:** This study included a medical chart audit of patients referred to the VLCD Clinic over 23 months, and a survey of recently treated patients and surgeons who utilised the model. Weight loss targets were set by surgeons, and the dietitian prescribed individualised VLCD-based treatment. Efficacy was determined as weight loss considered sufficient for surgery, clinical safety, feasibility, and stakeholder value. Pre/post-intervention differences in clinical measures were explored by paired t-test or Wilcoxon tests.

**Results:** Data on 78 eligible patients [mean (SD) 45(13) years, 90% female, body mass index 44.3 (6.2) kg m<sup>2</sup>] demonstrated significant mean (SD) weight loss of 7.4% (5.3%) body weight ( $P < .05$ ). Most patients (70%,  $n = 50/71$ ) achieved sufficient weight loss to proceed to surgery. Fifty-six per cent of patients reported mild side effects ( $n = 43/77$ ) and none led to treatment cessation. Surgeons reported VLCD-based treatment made operations easier (83%,  $n = 10/12$ ), shorter (75%,  $n = 9/12$ ) and all recommended the model. All surveyed patients ( $n = 24$ ) reported satisfaction with their experience.

**Conclusion:** A dietitian-led VLCD-based model achieved weight loss to facilitate elective surgery for most patients. The approach was feasible, valued by patients and surgeons, and resulted in perceived surgical benefits.

**Contact Author:** Sally Griffin - sally.griffin@hdr.qut.edu.au

**ID: 174 | Frailty and malnutrition in hospitalised older adults: A cross-sectional analysis of patient characteristics**

Chad Han<sup>1</sup>, Michelle Miller<sup>1</sup>, Alison Yaxley<sup>1</sup>, Yogesh Sharma<sup>2</sup>, Claire Baldwin<sup>1</sup>

<sup>1</sup>Flinders University, <sup>2</sup>Flinders Medical Centre

**Background:** Understanding patient characteristics of those frail and malnourished can help healthcare professionals to better design interventions.

**Aim:** To describe and compare characteristics of patients across frailty and nutritional status.

**Methods:** Cross-sectional data were collected from 329 hospitalised older adult patients. Frailty and nutritional status were determined by the Edmonton Frail Scale (EFS) and the Patient-Generated Subjective Global Assessment (PG-SGA), respectively. Patients were classified as (A) not frail, (B) frail or pre-frail, (C) frail or pre-frail and malnourished. The relationship between patient characteristics and these groups were explored univariately and by multinomial logistic regression.

**Results:** Of the 329 patients, 54.1% were female, mean age (SD) was 79.0 ± 8.2 years, mean BMI (SD) was 27.0 ± 6.3 kg/m<sup>2</sup>. More than half (56.8%) were frail or pre-frail, and 36.4% were malnourished. Prevalence of those not frail, frail or prefrail, and frail or pre-frail and malnourished were 43.3%, 27.1% and 29.8%, respectively. Using one-way ANOVA and chi-square tests, patients in group A, compared to those in groups B and C, were significantly younger, had lower Charlson comorbidity index, less medications, higher income and education levels. From adjusted multinomial logistic regression analyses, patients who were frail and malnourished, compared to those not frail, tended to have more medications (OR = 1.18, 95% CI: 1.08-1.29, *P* < .001), and belonged to a lowest income group (OR = 3.93, 95%CI: 1.29-11.9, *P* < .05).

**Conclusion:** Prevalence of hospitalised older adults that are frail or prefrail and malnourished remains high. Those with polypharmacy and from the lowest income group may be at most risk.

**Contact Author:** Chad Han - chad.han@flinders.edu.au

**ID: 129 | Nutrition risk screening methods for adults living with severe mental illness: A scoping review**

Lauren Hancox<sup>1</sup>, Pui Shuen Lee<sup>1</sup>, Natasha Armaghanian<sup>2</sup>, Vasant Hirani<sup>1</sup>, Georgia Wakefield<sup>3</sup>

<sup>1</sup>The University of Sydney, <sup>2</sup>Kolling Institute of Medical Research, Northern Sydney Local Health District,

<sup>3</sup>Wellbeing Unit, Macquarie Hospital

**Background:** Adults living with severe mental illness experience a greater burden of physical comorbidities and earlier mortality than the general population. Malnutrition, overnutrition, dysphagia, constipation and disordered eating have been observed in this population and can lead to poor nutritional status. Early identification of such conditions may reduce their impact on functional status, quality of life and health outcomes.

**Aim:** To identify all nutrition risk screening methods published in English internationally for use with adults living with severe mental illness and ascertain which, if any, were validated for the target population.

**Methods:** A four-step search strategy was used to search six electronic databases and grey literature, from inception to April 2020, for articles reporting nutrition risk screening methods used in this population. Information on the content and validity of screening methods was extracted and analysed by three independent reviewers.

**Results:** Seventeen nutrition risk screening methods were identified, of which three were validated within a population of adults with severe mental illness. One screening method was found for both malnutrition and dysphagia risk, respectively, and three for constipation risk. No single method was found for overnutrition. Eleven screening methods were identified for disordered eating risk, of which two were validated for the target population.

**Conclusion:** Nutrition risk screening methods and their validation in adults living with severe mental illness are inadequately researched. This scoping review highlights the need for future research to develop new or validate existing screening methods specifically for the target population.

**Contact Author:** Lauren Hancox - lauren@hancox.id.au

**ID: 97 | Dietitians' experiences working in the treatment of eating disorders: An integrative review**

Alana Heafala<sup>1</sup>, Jessica Rayner<sup>1</sup>, Lauren Ball<sup>1</sup>, Lana Mitchell<sup>1</sup>

<sup>1</sup>Griffith University

**Background:** Dietitians are recognised as essential members of multidisciplinary health care teams. However, dietitians' role in eating disorder treatment is not well understood, including how patients and carers experience nutrition care from dietitians.

**Aim:** To identify, critically appraise and synthesise evidence exploring the perspectives of dietitians, other health professionals, patients and carers regarding the role of dietitians in the treatment of eating disorders.

**Methods:** Five databases were searched in April 2020. Studies were included if they were original research;



explored views and experiences of dietitians' role in eating disorder treatment, including perceptions of patients, carers, and other health professionals; and the full-text article was in English. Screening, quality assessment and data extraction were completed in duplicate. The Mixed Methods Assessment Tool was used for quality assessment and thematic synthesis was used for data analysis.

**Results:** Fourteen studies met the inclusion criteria. Quantitative, qualitative and mixed methods study designs were included. Four themes (and related sub-themes) inductively emerged from the data: (i) dietitians as collaborators, educators and counsellors (dietitians have a role in prevention, early detection and nutrition education); (ii) individualising care and desiring a holistic approach (delivering patient-centred care, resulting in variability in practice); (iii) opportunities for gaining confidence (training and experience influencing clinician confidence); (iv) experiencing care as a patient or carer (valuing dietetic support).

**Conclusion:** An increased focus on eating disorder counselling techniques in credentialing and training programs may be beneficial for increasing dietitians' confidence and preparedness to work with people experiencing an eating disorder.

**Contact Author:** Alana Heafala - [alana.heafala@griffithuni.edu.au](mailto:alana.heafala@griffithuni.edu.au)

### ID: 177 | Streamlining placement-based medical nutrition therapy tutorials

Susan Heaney<sup>1</sup>, Sally Noble<sup>2</sup>, Shirlee Maxwell<sup>3,1</sup>, Barbara Belavic<sup>3</sup>, Kelly Squires<sup>4</sup>, Lisa Urquhart<sup>1</sup>, Elesya Crowley<sup>3</sup>, Amy Robinson<sup>4</sup>

<sup>1</sup>University of Newcastle, <sup>2</sup>Central Coast Local Health District, <sup>3</sup>Hunter New England Health John Hunter Hospital, <sup>4</sup>University of Newcastle Department of Rural Health

**Background:** University of Newcastle (UoN) funded educators and UoN Department of Rural Health academics established a collaborative group to focus on improving Medical Nutrition Therapy (MNT) placement. To align student learning the team identified a need to standardise MNT tutorials delivered in a placement-based setting to ensure they were focused on student learning needs, but also ensured they supported work ready cohorts of students as identified by educators and managers.

**Aim:** To determine the priorities for MNT tutorial topics and delivery methods from the perspectives of students, academics, supervisors, educators and managers. These

priority areas will be used to develop a series of tutorials developed using the diverse clinical and leadership skillset of the UoN collaborative educator's network to meet the needs of the students, compliment their placement-based learning and ensure the delivery of equitable and sustainable tutorials.

**Methods:** An online survey was developed and disseminated to all students who attended MNT placements in 2019. Academic staff, supervisors, educators and managers at sites where students attended MNT placement were also invited to participate.

**Results:** All participants (n = 16 supervisors; n = 5 students) reported that tutorials should be offered to students and that these would preferably be face to face where possible. Supervisors and students agreed on the top 3 ranked tutorial topics; medical notes and documentation, nutrition care process, diet disease relationships.

**Conclusion:** A suite of tutorials will be developed, implemented and evaluated to ensure a high-quality learning experience and allow for a standardised approach across our placement sites.

**Contact Author:** Susan Heaney - [susan.heaney@newcastle.edu.au](mailto:susan.heaney@newcastle.edu.au)

### ID: 179 | Better together – making the impossible possible!

Susan Heaney<sup>1</sup>, Lisa Urquhart<sup>1</sup>, Shirlee Maxwell<sup>2,1</sup>, Kelly Squires<sup>3</sup>, Barbara Belavic<sup>2</sup>, Sally Noble<sup>4</sup>

<sup>1</sup>University of Newcastle, <sup>2</sup>Hunter New England Health John Hunter Hospital, <sup>3</sup>University of Newcastle Department of Rural Health, <sup>4</sup>Central Coast Local Health District

**Background:** There are many challenges associated with supporting nutrition and dietetics students on placement. COVID-19 brought further challenges in delivering placements that were safe, appropriate and met Dietitians Australia Competency Standards. Over the last two years a group of Dietitian Clinical Educators and Academics met monthly via Zoom to provide collaborative support. Over time, they developed a common purpose to support a variety of student placements. They have also established a research project towards enhancing student and supervisor experiences.

**Aim:** To describe the outcomes of the UoN Nutrition and Dietetic Clinical Educator Group and report on experiences of those involved.

**Method:** Participants in the group (n = 6) wrote a brief (~200 word) reflective passage on their experience. A thematic analysis of the reflections was completed. In addition, outputs from the group in terms of shared

resources, and changes to the placements for students through the group working together are described.

**Results:** Confidence in navigating an uncertain environment and non-judgemental collegial supervision were experienced by group members. Members also reflected that by working together they were able to extend group outcomes beyond expectations. Outputs of the group have included a research project to standardise student tutorials collaboratively with placement supervisors. Materials for simulation activities were shared to support placement preparation during COVID restrictions. Group members supported clinical exposure for third year students through delivering a telehealth simulation clinic.

**Conclusion:** The Clinical Educator group have committed to ongoing monthly Zoom meetings to improve student placement experience, knowing that we are better together.

**Contact Author:** Susan Heaney - susan.heaney@newcastle.edu.au

#### ID: 222 | Weight-neutral interventions in young people with overweight or obesity: A systematic review

Johanna Hoare<sup>1</sup>, Natalie Lister<sup>1,2</sup>, Sarah Garnett<sup>3</sup>, Louise Baur<sup>3</sup>, Hiba Jebeile<sup>1,4</sup>

<sup>1</sup>University of Sydney, Children's Hospital Westmead Clinical School, <sup>2</sup>Institute of Endocrinology and Diabetes, The Children's Hospital at Westmead, <sup>3</sup>The University of Sydney, The Children's Hospital at Westmead, <sup>4</sup>Institute of Endocrinology and Diabetes, The Children's Hospital at Westmead

**Background:** Weight-neutral approaches are an emerging area of dietetic practice in adults. Their utility in young people with overweight/obesity is unknown.

**Aim:** To describe findings from weight-neutral interventions in health improvement-seeking young people (10-24 years) with overweight/obesity.

**Methods:** Six databases were systematically searched to December 2020. Studies were eligible if weight loss was not the intention of the intervention and included young people above healthy weight.

**Results:** Six articles met inclusion criteria, representing three pilot studies conducted in adolescents and none in young adults. Study 1 (n = 37, 14-17 years) a 6-week mindful eating program compared with a single lifestyle education session; Study 2 (n = 35, 14-17 years), 12-week non-diet lifestyle education program with/without guided imagery promoting health behaviours; and Study 3 (n = 33, 12-17 years), 6-week mindfulness intervention compared with cognitive-behavioural depression prevention

in adolescents at risk of type 2 diabetes with depressive symptoms. All studies reported weight-neutral interventions were feasible/acceptable. Studies 1 and 3 reported no change in mindfulness. Study 2 reported significantly greater increase ( $P < .05$ ) in intuitive eating (Hawks' Scale, 27-item, mean score 1-4) post-intervention in the non-diet plus guided imagery group ( $0.32 \pm 0.36$ ), compared with non-diet alone ( $0.15 \pm 0.29$ ). Study 1 reported a significant post-intervention decrease in BMI following mindful eating ( $-1.1 \text{ kg/m}^2$ ) and increase in the lifestyle group ( $+0.7 \text{ kg/m}^2$ ), with significant difference between groups ( $P < .001$ ). Study 2 reported no change in BMI. Study 3 reported BMIz decreased following mindfulness at 1-year follow-up ( $-0.16$ ), with no between-group difference.

**Conclusion:** Early data suggest weight-neutral interventions may be feasible/acceptable in adolescents with overweight/obesity, warranting further research.

**Contact Author:** Johanna Hoare - jhoa4051@uni.sydney.edu.au

#### ID: 173 | Preliminary implementation evaluation of a very low calorie diet clinic for elective general surgery patients

Greta Hollis<sup>1</sup>, Cameron French<sup>1</sup>, Jack Bell<sup>2</sup>

<sup>1</sup>The Prince Charles Hospital, <sup>2</sup>Queensland Health

**Background:** The feasibility of implementing a preoperative Very Low Calorie Diet (VLCD) clinic for elective surgery has been previously demonstrated. However, the effectiveness on total weight and lean body mass loss remains unclear. A routine preoperative VLCD clinic for patients with obesity awaiting elective general surgery was implemented at The Prince Charles Hospital in June 2018.

**Aim:** Undertake a knowledge translation to practice evaluation, to determine the effectiveness of a pre-surgical VLCD clinic on patient outcomes.

**Methods:** A quality improvement program aligned to the RE-AIM and Knowledge to Action Frameworks. Eligible participants awaiting elective general surgery, undertook an outpatient based dietitian led VLCD program for up to 8 weeks, incorporating Optifast (Nestle Health) shakes.

**Results:** A prospective sample of ninety-nine patients (M 42: F 57, mean age 49.4 years) to date with a mean body mass index  $>30 \text{ kg/m}^2$  ( $39 \text{ kg/m}^2$ ) who attended the clinic were included. A significant mean weight loss ( $-7.4 \text{ kg}$ ;  $P < .001$ ) and reduction in waist circumference ( $-6.3 \text{ cm}$ );  $P = <.001$ ) was demonstrated. Muscle mass loss measured by bioelectrical impedance analysis was

statistically significant ( $-2.6$  kg);  $P < .001$ ). Lean muscle mass was not considered clinically significant; however, 27 patients lost greater than 5% muscle mass.

**Conclusion:** Implementation evaluation demonstrates that a VLCD program achieves substantial preoperative weight loss. Whilst excessive loss of muscle mass was not observed in most patients, ongoing work is underway to consider whether those with greater than 5% loss of muscle mass, influences surgical outcomes.

**Contact Author:** Greta Hollis - greta.hollis@health.qld.gov.au

### ID: 80 | Evaluation of home enteral nutrition program in Southern Tasmania

Roger Hughes<sup>1</sup>, Georgia Johnstone<sup>2</sup>, Elaine Hart<sup>3</sup>, Ruth Bourne<sup>2</sup>

<sup>1</sup>University of Tasmania, <sup>2</sup>Royal Hobart Hospital,

<sup>3</sup>Tasmanian Health Service

**Background:** Home enteral nutrition (HEN) involves the provision of nutritional support to patients at home (oral and enteral). It is recognised as a cost-effective and patient friendly way to review patients post-acute discharge. It has the potential to reduce hospital length of stay, readmissions and improve patient outcomes.

**Aim:** To explore existing data that describes home enteral nutrition service exposures, health outcomes and resource utilisation amongst a sample of home enteral nutrition patients in Southern Tasmania.

**Methods:** A retrospective sample of 100 HEN patients were sampled from August 2017, allowing 12 months exposure to HEN. A data set was developed using data from the Tasmanian Health Service Digital Medical Records (DMR) and the software utilised to prescribe HEN (DietCare). Data collection included demographic, anthropometry, medical history, route of nutrition, nutrition status, nutrition subscription, compliance to script, supplement costs, wastage and dietitian time. Data were analysed descriptively.

**Results:** A total of 43 patient were included. The average profile of patients utilising HEN were older ( $>65$  years), male (66%) and oncology patients. Almost one-third died (15/43), reflecting illness severity of these patients. Nutrition support goals were not achieved in  $\sim 40\%$ , mostly with unintentional weight loss, related largely to lack of patient compliance to prescription and unpreventable chronic disease complications. On average each patient was reviewed six times (range, 1-19).

**Conclusion:** This analysis has highlighted gaps in patient monitoring data and opportunities to enhance

patient record keeping. Analysis of existing data suggests a need for more detailed investigation of service efficiency and efficacy.

**Contact Author:** Roger Hughes - roger.hughes@utas.edu.au

### ID: 204 | Does routine screening of Vitamin D status occur for residents of rural multipurpose facilities?

Elizabeth Jeffries<sup>1</sup>, Catherine Forbes<sup>1</sup>, Anne Christie<sup>1</sup>, Ming Hu<sup>2</sup>

<sup>1</sup>Western New South Wales Local Health District,

<sup>2</sup>Previously Western NSW LHD

**Background:** Western NSW Local Health District (WNSWLHD) is the largest health district in New South Wales. There are 421 residential aged care (RAC) beds across the districts twenty-five Multi-Purpose Service (MPS) facilities. Vitamin D deficiency has associations with frailty, is an independent predictor of falls, and occurs in approximately sixty-eight to eighty-six percent of institutionalised elderly in Australia. A lack of evidence of assessment of Vitamin D status in RAC residents was identified by the virtual dietetic team prompting investigation.

**Aim:** To determine current practices surrounding the assessment and treatment of Vitamin D status and frequency of weight checks in people aged over 65 living in MPS facilities in WNSWLHD.

**Methods:** A remote file audit was conducted retrospectively over 12 months (July 2019 to June 2020) via e-medical records (eMR) through CERNER PowerChart to 16 MPS sites. This audit reviewed residents for frequency of weight monitoring and Vitamin D screening and supplementation over a 12-month period.

**Results:** Thirty-one percent of residents had their Vitamin D levels checked during the 12 month period, of which thirty-two percent were identified as mildly-moderately deficient. Monthly weight checks had occurred in seventeen percent of residents and monthly malnutrition screening in 31%.

**Conclusion:** These results identify the need to implement annual Vitamin D testing and monthly weight and malnutrition screening processes for all permanent residents, to promote and maintain the health and wellness of this at risk population group. Ongoing staff education and significant change management will be essential to the success of this initiative.

**Contact Author:** Elizabeth Jeffries - Elizabeth.Jeffries@health.nsw.gov.au

**ID: 33 | What to eat during in vitro fertilisation (IVF) treatment to maximise fertility?: A systematic review**

Nicole Kellow<sup>1</sup>, Jake Le Cerf<sup>1</sup>  
<sup>1</sup>Monash University

**Background:** The nutritional status of reproductive-aged couples can have a significant impact on fertility status, but the effect of dietary patterns on pregnancy outcomes in people using assisted reproductive technologies (ART) is currently unknown.

**Aim:** To synthesise the published research investigating the relationship between dietary patterns and clinical pregnancy or live birth outcomes in men and women of reproductive age undergoing ART.

**Methods:** Six electronic databases were systematically searched for original research published between January 1978 and December 2020 reporting on the effect of pre-defined dietary patterns on either clinical pregnancy and/or live birth rates following IVF or intracytoplasmic sperm injection in men and women aged 18 to 49 years. Eligible studies underwent quality assessment and qualitative and quantitative synthesis using random-effects model meta-analyses.

**Results:** Twelve studies (11 cohort studies, 1 RCT) reporting on 3144 participants (92% female) were included in the review. Six studies were of positive methodological quality, and 11 studies used validated food frequency questionnaires to quantify dietary pattern adherence. In individual studies, three dietary patterns (Mediterranean diet, pro-fertility diet, Iranian traditional medicine diet) were associated with increased likelihood of achieving a clinical pregnancy, while two dietary patterns (pro-fertility diet, Mediterranean diet) were associated with increased probability of live birth. Meta-analyses of five studies showed no association between the Mediterranean dietary pattern and clinical pregnancy (OR 1.3; 95% CI: 0.73-1.72,  $P = .59$ ) or live birth (OR 1.51; 95% CI: 0.83-2.76,  $P = .18$ ).

**Conclusion:** As the association between dietary patterns and ART outcomes is currently inconsistent, higher quality nutrition research is required.

**Contact Author:** Nicole Kellow - nicole.kellow@monash.edu

**ID: 240 | Blue Skies beyond COVID-19 at the Queensland University of Technology**

Carolyn Keogh<sup>1</sup>, Mary Hannan-Jones<sup>1</sup>, Rebecca Byrne<sup>1</sup>, Lynda Ross<sup>1,2</sup>, Ali Disher<sup>1</sup>, Smita Nambiar-Mann<sup>1</sup>, Emily Gill<sup>3</sup>, Helen MacLaughlin<sup>1</sup>, Helen Vidgen<sup>1</sup>, Fiona Willer<sup>1</sup>, Katherine Hanna<sup>1</sup>, Rebecca Downes<sup>1</sup>

<sup>1</sup>Queensland University of Technology, <sup>2</sup>Griffith University, <sup>3</sup>QUT Health Clinics

**Background:** As COVID-19 hit in March 2020, the Bachelor of Nutrition and Dietetics (Honours) program was rapidly transformed. Traditional face-to-face teaching and Work Integrated Learning (WIL) ceased but opportunities for innovative curriculum created.

**Aim:** To describe the transformation of a four-year dietetic training program and challenges and opportunities that arose from a global pandemic.

**Methods:** Quantitative and qualitative data of student experiences and learning outcomes were collected throughout 2020 relating to pedagogical changes implemented in response to COVID-19 restrictions. Subjects from first to third year were evaluated midway and end of semester, with face-to-face focus groups conducted with fourth year students at conclusion of the academic year. Student performance and competency assessment was reviewed and compared to prior years. The honours research program was redesigned to manage risk, including the implementation of a peer learning model. New models of WIL including remote, international, and online placements were trialled and implemented.

**Results:** All teaching and assessment was successfully created and transferred to online modality. Students engaged in innovative online learning activities supporting competency development, including communication skills through the repurposing of the university dietetics clinic while patient services were suspended. Good student satisfaction was reported, with WIL competency achievement consistent to pre-pandemic.

**Conclusion:** Although 2020 presented many challenges for learning and teaching, opportunities to create innovative pedagogical practices can lead to the development of reflexive, resilient and competent graduates. The honours curriculum for 2021 and beyond is embracing exciting new ways of delivery for a rapidly transforming digital world.

**Contact Author:** Carolyn Keogh - Carolyn.Keogh@qut.edu.au

**ID: 239 | Food for thought: Nutrition and dietetics graduates' perceptions of preparedness for employment**

Isabella Kibby<sup>1</sup>, Meg O'Connor<sup>1</sup>, Mary Hannan-Jones<sup>1</sup>, Carolyn Keogh<sup>1</sup>, Rebecca Downes<sup>1</sup>  
<sup>1</sup>Queensland University of Technology

**Background:** As evidence and practice in dietetics evolves, responding to complex consumer healthcare needs,

training programs must effectively equip graduates to meet these demands so they are relevant and responsive to deliver contemporary and future health services.

**Aim:** To evaluate dietetic curricula's effectiveness in preparing graduates for contemporary employment to service current and future healthcare needs.

**Methods:** Alumni from an Australian accredited nutrition and dietetics program who graduated between 2015 and 2019 were invited to participate in an online survey via targeted social media posts. Graduates' employment preparedness and attributes were obtained via survey questions developed around Miller's Pyramid of competency development and Dacre and Sewell's Employability Framework. Additional questions gathered details of employment since graduation and reflections on the curriculum's effectiveness in supporting this.

**Results:** Respondents ( $n = 66$ ) represented 27% of all eligible graduates, with 56 (85%) employed in dietetics, and acute-care and private practice the predominant first settings (54%). Most graduates reported suitable preparedness with the necessary generic skills (71%) and professional experience (67%) to practice in first positions. Graduates describe a strong emphasis on preparation for traditional clinical roles during formal training while acknowledging missed opportunities for Work Integrated Learning (WIL) experience in contemporary areas such as private practice and food industry.

**Conclusion:** Nutrition and dietetics curricula can be enhanced by realigning WIL into contemporary and emerging areas to support preparedness for employment and future health service delivery needs. Further research should consider a nation-wide graduate sample to inform revisions to national curriculum standards including WIL contexts and experiences.

**Contact Author:** Isabella Kibby - bella.kibby@hotmail.com

### ID: 117 | Symptoms are associated with dietary intake and physical activity in patients with malignant pleural mesothelioma

Tsz Yan Lau<sup>1</sup>, Carolyn Peddle-McIntyre<sup>2</sup>, YC Gary Lee<sup>3</sup>, Rob Newton<sup>2</sup>, Philippa Lyons-Wal<sup>2</sup>, Joanne McVeigh<sup>1</sup>, Anna Nowak<sup>3</sup>, Emily Jeffery<sup>1</sup>

<sup>1</sup>Curtin University, <sup>2</sup>Edith Cowan University, <sup>3</sup>University of Western Australia

**Background:** Malignant pleural mesothelioma is an incurable cancer. Patients commonly experience high symptom burden, which could negatively impact dietary intake and physical activity, increasing malnutrition and

sarcopenia risks. Understanding of relationship between symptom burden and dietary intake and physical activity is currently lacking.

**Aim:** To examine differences in dietary intake and physical activity according to symptom burden in patients with malignant pleural mesothelioma.

**Methods:** This was a secondary analysis of patients with malignant pleural mesothelioma. Energy intake was measured using a 3-day food record. Daily step count and activity levels were measured with an accelerometer worn for 3 days. Participants self-reported ten symptoms on Edmonton Symptom Assessment Scale. Score of 0 to 3 indicated absence or mild symptom,  $\geq 4$  indicated moderate-to-severe intensity.

**Results:** 51 participants were included (78.4% men, median age 68.5 years [IQR 62-74], 74.5% epithelioid subtype). Participants with moderate-to-severe appetite loss, depression or anxiety had significantly lower mean energy intake than those with none-to-mild symptom ( $92 \pm 35$  vs  $124 \pm 39$  kJ/kg/day;  $P = .016$ ,  $91 \pm 28$  vs  $122 \pm 41$  kJ/kg/day;  $P = .048$  and  $95 \pm 28$  vs  $123 \pm 41$  kJ/kg/day;  $P = .036$ , respectively). Energy intake did not differ between participants with  $\geq 3$  and 0 to 2 moderate-to-severe symptoms ( $P = .19$ ). Although moderate-to-vigorous activity did not differ between symptom intensities ( $P > .05$ ), participants with  $\geq 3$  moderate-to-severe symptoms walked significantly less than those with 0 to 2 ( $4594 \pm 2483$  vs  $6194 \pm 2627$  steps/day;  $P = .049$ ).

**Conclusion:** Symptom presence could indicate which patients are at risk of lower dietary intake and step count. Key symptoms assessment and management could be useful in improving dietary intake and activity levels.

**Contact Author:** Tsz Yan Lau - tszyan.lau1@postgrad.curtin.edu.au

### ID: 148 | A survey of patient meal experiences and plate waste in a maternity hospital

Amelia Lee<sup>1</sup>, Jemima Tomlin<sup>2</sup>, Celeste Costanzo<sup>2</sup>, Elisabeth Gasparini<sup>1</sup>

<sup>1</sup>Royal Women's Hospital, <sup>2</sup>Deakin University

**Background:** Previous studies have shown that meal quality and meal ordering systems can influence dietary intakes and patient meal experiences. Evidence is limited in the obstetric patient population.

**Aim:** To explore patient meal experiences and menu completion rates. To assess plate waste of obstetric patients in a metropolitan maternity hospital.

**Method:** Eligible obstetric patients were surveyed using a self-administered modified metropolitan meal survey over two weeks. The 21-item survey covered meal quality,

meal service and meal ordering preferences. In the same two week period, patient meal trays were photographed once collected from patients and plate waste assessed using a 7-point validated visual estimation scale. An audit of menu completion was conducted over four days.

**Results:** Seventy percent of participants always or mostly enjoyed their meals. Taste (88%), nutrition (70%) and temperature (62%) were the most frequently indicated elements required to enjoy a meal (n = 50). Seventy-four percent of participants would prefer ordering their meals on a phone app compared to the current paper menu. Forty-six percent of the menus were completed at time of collection. Total plate waste was 36% at breakfast (n = 184) and 47% at lunch (n = 284). There was a trend towards higher plate waste in the postnatal wards compared to the antenatal ward.

**Conclusion:** Patient meal experiences, menu completion rates and plate waste are not optimal. Further research exploring the impact of electronic meal ordering on the meal experience and plate waste in an obstetric population is needed.

**Contact Author:** Amelia Lee - amelia.lee@thewomens.org.au

### **ID: 211 | Releasing capacity of renal dietitian through delegation to allied health assistant in workforce re-design**

Mia Matwiejczyk<sup>1</sup>

<sup>1</sup>Rockhampton Hospital, Central Queensland Hospital and Health Service

**Background:** Limited dietetic workforce and increasing demand was resulting in excess acute and ambulatory patient wait times (March 2020), and the dietitian was unable to meet current best practice for degree of interventions and screening for renal patients.

**Aim:** To determine if delegation to the new position of Allied Health Assistant – Dietetics would release capacity of the dietitian to improve patient access to the service and meet best practice guidelines.

**Methods:** Dietitian clinical tasks were reviewed to determine low to high value utilising the Calderdale Framework. The renal dietitian provided clinical task instruction training and supervision for the allied health assistant in low value clinical tasks.

**Results:** Whilst initial investment in training and establishing new processes in this service provision model of care transformation via job re-design, delegation increased capacity of the dietitian to increase occasions of service. This reduced waiting time to within targets, increased degree of interventions, and increased job

satisfaction in carrying out high value tasks and developing and utilising delegation and supervision skills. Bi-annual screening was able to be completed, with increased identification of patient need.

**Conclusion:** Job redesign, with delegation of suitable clinical tasks to the allied health assistant workforce, can increase capacity of the dietitian to work to full scope, improve patient access and safe quality care. This potentially improves patient health and well-being and reduces preventable hospital re/admissions and admission length, whilst increasing delegation and supervision skills and job satisfaction. Structured training for delegation and supervisor/supervisee skills are essential for clinicians and allied health assistants.

**Contact Author:** Mia Matwiejczyk - mianicola65@gmail.com

### **ID: 159 | Food reformulation in Australia: Qualitative research of food industry experiences**

Jane Marriott<sup>1</sup>, Vicki Flood<sup>2</sup>, Jimmy Chun Yu Louie<sup>3</sup>, Janelle Gifford<sup>1</sup>

<sup>1</sup>University of Sydney, <sup>2</sup>Sydney School of Health Sciences, Faculty of Medicine and Health, University of Sydney, <sup>3</sup>The University of Hong Kong

**Background:** There is limited published research of the experiences, enablers, challenges and benefits associated with food reformulation, from the perspective of the food industry.

**Aim:** To explore and describe food industry experiences of reformulation in Australia in relation to achieving eligibility for interpretative labelling programs, with a particular focus on experiences of licensees of the National Heart Foundation Tick Program (“Tick”).

**Methods:** A semi-structured interview schedule was used to explore experiences, enablers, challenges and benefits associated with food reformulation and front-of-pack labelling. Interviewees were purposefully sampled to include manufacturers, retailers and industry bodies to ensure the exploration of a range of experiences. Interviews were transcribed verbatim and analysed using thematic analysis.

**Results:** Ten interviews were conducted. Eight themes were identified as important elements for reformulation: external context; criteria guidelines; consumer considerations; practical elements; communication; volume/extent of work; staff training/support; and future directions. Informing these were 51 sub-themes covering a range of topics. Key were potential for

reformulation; the significance of the food industry in the process (expertise, technical skills and consumer understanding); influence of retailers and consumer demand; benefit of trusted third-party endorsement; value of independent quality systems; global influences; health literacy; collaboration and partnership; and evaluation.

**Conclusion:** While individual stakeholders have their unique insights regarding food reformulation, there were many shared findings common to all. This research points to the multi-faceted nature of influences and considerations required for a healthier food supply. Our findings provide important information to support reformulation programs, such as the Health Star Rating.

**Contact Author:** Jane Marriott - jane.marriott8@gmail.com

### ID: 52 | Managing menopause and post-reproductive health with nutrition and lifestyle

Skye Marshall<sup>1,2</sup>, Margaret Rees<sup>3</sup>

<sup>1</sup>Nutrition Research Australia, <sup>2</sup>Bond University Nutrition & Dietetics Research Group, <sup>3</sup>European Menopause and Andropause Society, University of Oxford

**Background:** There has been increasing interest in nonhormonal- and nonmedication-based approaches to managing menopausal symptoms and optimising post-reproductive health.

**Aim:** To examine the recent evidence for dietary and lifestyle management of post-reproductive health in women, specifically examining interventions for menopausal vasomotor symptoms, cardiovascular disease, osteoporosis, and dementia and cognitive decline.

**Methods:** Published systematic reviews and clinical trials were drawn upon and narratively synthesised.

**Results:** Physical activity of any kind and a plant-based dietary pattern rich in extra virgin olive oil and fish, such as the Mediterranean diet, were found to improve menopausal vasomotor symptoms, cardiovascular disease and osteoporosis risk, and cognitive function. Vitamin D and calcium supplementation may improve osteoporosis risk only if the nutrients cannot be met by diet alone. Omega-3 polyunsaturated fatty acids and resveratrol supplementation may have beneficial effects on cognitive function. There is no evidence avoiding “triggers” improves menopausal vasomotor symptoms, and nutraceuticals such as black cohosh may cause serious adverse events. Dietary restriction for weight loss may worsen osteoporosis risk.

**Conclusion:** Promoting a healthy plant-based dietary pattern, whilst preventing both obesity and protein-

energy malnutrition needs, to be combined with physical activity. All interventions must be cost effective, culturally acceptable and enjoyable.

**Contact Author:** Skye Marshall - skye@nraus.com

### ID: 25 | Toddler specific foods and milks are expensive and no better than junk food

Jennifer McCann<sup>1</sup>, Julie Woods<sup>1</sup>, Georgie Russell<sup>1</sup>, Kelsey Beckford<sup>1</sup>, Holly Beswick<sup>2</sup>, Melanie Chisholm<sup>3</sup>  
<sup>1</sup>Deakin University, <sup>2</sup>VicHealth, <sup>3</sup>Department of Health

**Background:** Ultra-processed food and milks are increasing worldwide, with a growing amount of evidence supporting negative outcomes associated with consuming a diet high in these products. There is now global evidence demonstrating that ultra-processed foods are a significant part of young children's diets.

**Aim:** To compare the cost and nutritional profiles of toddler milks to the cost of a variety of fresh milks and to compare the cost and nutritional profiles of toddler foods to non-toddler foods.

**Methods:** Using the online shopping sections of national supermarkets (Coles, Woolworths) a search was conducted to collect data on the cost and nutritional profiles of a variety of products, comparable to the toddler foods and milks included in a 2019 Australian audit of these products.

**Results:** Overall, all fresh milk varieties cost less than their toddler milk counterparts. In addition, the fresh milk varieties had a higher energy, protein, fat, saturated fat, sodium and calcium content per serve when compared to similar toddler milk based products, and fresh milks had a lower carbohydrate and total sugar content per 100 mL. Regular food products were cheaper than the toddler versions per serve, with the exception of the raw/organic balls/bites. Differences in price were magnified when comparing prices per 100 g. When comparing toddler specific foods to similar ‘regular’ products, the toddler varieties were lower in all nutrients when compared per serve, but differences became much less pronounced when compared on a per 100 g basis.

**Conclusion:** Toddler specific foods and milks are costly, and nutritionally not worth the price.

**Contact Author:** Jennifer McCann - J.mccann@deakin.edu.au

### ID: 26 | Trends in toddler foods over time

Jennifer McCann<sup>1</sup>, Julie Woods<sup>1</sup>, Georgie Russell<sup>1</sup>  
<sup>1</sup>Deakin University

**Background:** As family lives become busier, consumer demand for convenience is strong. Research indicates that the healthiness of the packaged food supply for children has not improved over time, alongside a sharp increase in foods for toddlers.

**Aim:** To determine trends over time in the nutrition and packaging characteristics of toddler specific foods in the Australian retail market.

**Methods:** Previously published data (November 2019) were compared to new data (June 1996–September 2019) collected from the Mintel database on toddler foods. Products were classified as a snack or meal and snacks were also sub-classified. Products were also classified according to the Australian Dietary Guidelines (ADG) and NOVA. Data were compared on number of products in each category and subcategories, ADG (core or discretionary), NOVA classification, nutritional information and on pack messages.

**Results:** The distribution of foods in each category and sub-category remained stable over time, as well as the ADG and NOVA classification, with the exception of more processed and less minimally processed foods in the retrospective dataset compared to the 2019 results. There were significant differences in on pack messages with a higher number of regulated health claims in the 2019 results. Overall there were higher values for fat and saturated fat in the 2019 results, and higher carbohydrate and sugar values in the retrospective data.

**Conclusion:** Evidence now demonstrates toddler foods are an emerging market and has not become healthier over time. Urgent policy action is needed to ensure a safe and healthy food supply for children.

**Contact Author:** Jennifer McCann - J.mccann@deakin.edu.au

### ID: 91 | Workshop-style learning improves quality of SMART goals in the clinical setting

Joanne McKinstry<sup>1</sup>

<sup>1</sup>Monash Health

**Background:** Goal setting is an essential, established step of the electronic Nutrition Care Process Terminology (eNCPT). Anecdotal reports suggest dietitians have difficulty setting appropriate goals in the inpatient setting, particularly when length of stay is short.

**Aim:** To develop an evidence-based workshop to improve dietitians' knowledge and skills utilising a patient-centred approach to document Specific, Measurable, Achievable, Relevant, Time-referenced (SMART) goals, and to determine if this improves documentation of outcome measures for goals.

**Methods:** An audit was completed on 50 dietetic assessments in medical histories to assess quality of goals against SMART criteria. A workshop was developed based on literature review and audit outcomes and presented to 30 dietitians. Evaluation data measured attendees' goal setting confidence and skills pre- and post-workshop. A repeat documentation audit was completed one month post-workshop for comparative analysis.

**Results:** The documentation audit showed 90% dietetic assessments included a goal, and 62% review entries included an outcome measure for a goal. The average score for the 5 SMART domains was 3.4/5. The SMART goal score for a case study improved from 3.7/5 before the workshop to 4.7/5 after; and dietitians' self-reported confidence in goal setting improved from 7.0/10 to 8.6/10.

**Conclusion:** Workshop-style learning showed improvements in self-rated confidence and skill of goal setting, and improvement in meeting the five domains of SMART. Qualitative feedback showed attendees highly value opportunity for case discussions. Post-workshop audits will be important to determine if improvements were sustained.

**Contact Author:** Joanne McKinstry - jo.mckinstry@monashhealth.org

### ID: 99 | Multidisciplinary perspectives on implementation of the Mediterranean diet in kidney and liver transplant nutrition care

Taya McLaren – Hedwards<sup>1</sup>, Ingrid Hickman<sup>3,4</sup>, Katrina Campbell<sup>2</sup>, Graeme Macdonald<sup>3,4</sup>, Hannah Mayr<sup>3,5,6</sup>

<sup>1</sup>The University of Queensland, <sup>2</sup>Metro North Hospital and Health Service, <sup>3</sup>Princess Alexandra Hospital, <sup>4</sup>University of Queensland, <sup>5</sup>School of Allied Health, Human Services and Sport, La Trobe University, <sup>6</sup>Bond University Nutrition and Dietetics Research Group, Bond University

**Background:** Metabolic syndrome and type 2 diabetes are prevalent in solid organ transplant recipients. Evidence supports cardiometabolic risk reduction with a Mediterranean dietary pattern (MDP) which is a compelling proposition in this group.

**Aim:** To assess multidisciplinary perspectives of routine nutrition care for kidney and liver transplant recipients and barriers and enablers to implementation of the MDP.

**Methods:** Semi-structured individual interviews were conducted with clinicians involved in longer-term management of kidney and liver transplants recipients in a metropolitan Australian health service. Audio-recorded interviews were transcribed verbatim and analysed using thematic content analysis.



**Results:** Nineteen clinicians (9 medical officers, 5 dietitians, 3 nurses and 2 other allied health professionals) were interviewed. Four themes were identified: (1) 'the MDP is not part of routine care' highlighted competing clinical priorities and that healthy eating principles aligned with but not the full MDP are recommended; (2) 'variation in knowledge and acceptance of the MDP' highlighted variances in information sources and degree of knowledge of evidence for the MDP; (3) 'nutrition advice is influenced by service delivery and culture' highlighted perceptions around a lack of consistent nutrition advice, limited consultation time and importance of patient education resources; and (4) 'patient-centred care influences decisions on nutrition advice' highlighted clinicians don't know how to deliver the MDP in a patient-centred manner.

**Conclusion:** Despite its potential to reduce cardiometabolic risk, the MDP was not part of routine post-transplant nutrition care. Interventions which target identified barriers and enablers should be considered to optimise nutrition care for this group.

**Contact Author:** Taya McLaren - Hedwards - tayamclaren@hotmail.com

#### **ID: 47 | Parenteral nutrition - Let's consider the liver**

Georgia Moore<sup>1</sup>, Lina Breik<sup>1,2</sup>, Graeme Duke<sup>1</sup>, Stephanie Hunter<sup>3</sup>

<sup>1</sup>Eastern Health, <sup>2</sup>Tube Dietitian, <sup>3</sup>8 Arnold Street

**Background:** Liver derangement occurs frequently in patients receiving parenteral nutrition (PN). The type of lipid in the PN formula is a potential modifiable contributing factor. Fish-oil containing formulas have been hypothesised to provide a benefit. Box Hill Hospital stocks and prescribes both fish-oil and olive-oil lipid formulas. The current Eastern Health policy is to use a fish-oil formula for patients with liver derangement.

**Aim:** To determine the prevalence of liver derangement at day 5 of PN commencement and to compare prescribing rates of fish-oil containing formula to local recommendations.

**Methods:** A retrospective medical record audit was undertaken between April and July 2020 on 20 randomly selected patients that were prescribed PN. Demographic data were collected along with the following outcome measures; (a) number of days on PN, (b) liver function while on PN and (c) type of PN formula prescribed. Data were collected using REDCaps (Research Electronic Data Capture) and ethical approval was obtained.

**Results:** The majority of patients were male (70%) and malnourished (90%). The most common indication for PN was ileus. The average number of PN days was 9.5. At day 5 of PN prescription, 53% of patients had liver derangement. 71% and 29% of these patients were prescribed a fish-oil and olive-oil containing formula, respectively.

**Conclusion:** This audit demonstrates that liver derangement is highly prevalent in this vulnerable population. Prescribing rates of the fish-oil containing formula does not reflect local recommendations. Further exploration is required to understand why local recommendations are not reflected in practice.

**Contact Author:** Georgia Moore - georgia.moore@easternhealth.org.au

#### **ID: 209 | Enteral refeeding for medically compromised patients with eating disorders: A management scorecard for the year of COVID-19**

Kate Morgan<sup>1</sup>, Clare Cutmore<sup>1</sup>, Kylie Matthews-Rensch<sup>2</sup>  
<sup>1</sup>Queensland Health, <sup>2</sup>Royal Brisbane Women's Hospital

**Background:** In Queensland, nutritional management of adult patients with medically compromised eating disorders (EDs) is guided by a state-wide enteral refeeding protocol. The health service is known for high compliance rates to protocol, however the impacts of COVID-19 may have inadvertently affected care.

**Aim:** To audit adherence to this protocol at a metropolitan hospital in 2020.

**Methods:** All patients admitted in 2020 to medical wards for ED management were included. Adherence was measured by commencement of enteral feeds within 24 hours of admission, and enteral feeds continuing for a minimum of seven days. Adherence data were compared with 2019 data. Discharge destinations were also collected.

**Results:** There were 124 admissions (94%F, 25 ± 8 years, BMI at admission: 19 ± 3.9 kg/m<sup>2</sup>) (14% increase). Most patients (83%, n = 103/124) were commenced on enteral feeds within 24 hours (7% decline). Excluding inter-hospital medical transfers, 63% (n = 75/119) of patients received enteral feeds for a minimum of seven days (24% decline). Primary reasons for lack of protocol adherence: patient behavioural issues resulting in changes to treatment and early medical clearance due to the patient being considered 'low risk'. Patients were discharged to home (64%, n = 77/124), public mental health (24%, n = 30/124), inter-hospital transfers (4%, n = 5/124) or to private mental health (10%, n = 13/124). Home discharges increased (22%) and mental health admissions decreased (23%).

**Conclusion:** Adherence declined in 2020. 'Low risk' patients were discharged early despite any agreed upon 'low risk' criteria or alternative protocol. Further investigation is warranted as to whether this was secondary to the impacts of COVID-19.

**Contact Author:** Kate Morgan - kate.morgan3@health.qld.gov.au

#### ID: 14 | Salted vs unsalted, roasted vs raw – is it time to reconsider nuts?

Belinda Neville<sup>1</sup>

<sup>1</sup>*Nuts for Life*

**Background:** Even though strong evidence shows nuts are a key food in healthy dietary patterns, recommendations by health professionals to eat nuts are often 'qualified' due to long-held perceptions that salted and roasted nuts are unhealthy and less desirable than unsalted, raw nuts.

**Aim:** To collect the nutritional information of available nuts in major supermarkets and grocers, and compare the salt and fat content of roasted and salted nuts to raw unsalted nuts; and to draw comparisons between nuts and other commonly consumed foods and dispel some of the misperceptions for increasing nut intake.

**Method:** Major supermarkets across Sydney's lower north shore (Woolworths, Coles, Aldi and IGA), and a green grocer (Harris Farm) were visited in September 2020. All whole and chopped nut products available in all categories (fresh produce, snacks/impulse, and baking) were photographed. Nutritional information per 100 g was then entered into an excel spreadsheet.

**Results:** Information for more than 150 products was collected. The energy (kilojoule) content of raw unsalted nuts is similar to the energy content of oil roasted salted nuts, providing around 780 kJ per 30 g handful. The fat content remained fairly consistent between raw nuts and oil roasted nuts. Salted nuts contained an average 1/4 g of salt per 30 g serve, with up to 343 mg/100 g of sodium.

**Conclusion:** To increase population intakes of nuts, it is useful for health professionals to understand barriers to recommending them. This review showed that salted and roasted nuts are not as bad as many health professionals perceive them to be.

**Contact Author:** Belinda Neville - belinda.neville@nut-sforlife.com.au

#### ID: 233 | Maintenance of a state-wide centre-based childcare multi-strategy nutrition incentive seven years post-program cessation

Christina Norris<sup>1</sup>, Lucinda Bell<sup>1</sup>, Dorota Zarnowiecki<sup>1</sup>,  
Louisa Matwiejczyk<sup>1</sup>

<sup>1</sup>*Flinders University*

**Background:** Supporting developing healthy eating habits in children attending centre-based childcare is a global public health priority. Despite considerable effort, very few studies have researched what nutrition-best practices have been maintained post-intervention without researcher or external expert support.

**Aim:** The cessation of a state-wide, multi-strategy nutrition award scheme in 2015, employed by most SA centres over 13 years, created a unique opportunity to explore what components of Start Right Eat Right have been maintained in daily practices seven years post-program without external support. A secondary aim was to understand what the enablers and barriers were to sustainability.

**Methods:** Using the maintenance domain of the RE-AIM framework, qualitative methods explored the motivations, and perceived enablers and barriers according to SA childcare personnel. Semi-structured interviews (n = 10) with directors and cooks (n = 19) from 10 childcare centres previously Start Right Eat Right awarded were conducted using maximum variant sampling. Data were analysed using thematic analysis.

**Results:** Four themes pertained to food provision, nutrition policy, the mealtime environment and training and knowledge transfer. Enablers were centre-specific healthy eating policy and remnant expert-developed menu-planning guidelines and tools. An absence of affordable system-wide training, mechanisms for passing on knowledge between staff and currency of knowledge were the main barriers.

**Conclusion:** Important elements were maintained despite program cessation seven years earlier. Understanding the barriers and enablers can inform future policy and research to support the development of sustainable nutrition programs. Imperative to this understanding is the experiences of childcare personnel who implement best practice into daily routines.

**Contact Author:** Louisa Matwiejczyk - louisa.matwiejczyk@flinders.edu.au

#### ID: 95 | Safety and effectiveness of low calorie diet for dialysis patients: A pilot interventional study

Nadia Obeid<sup>1</sup>, Tim Pianta<sup>1</sup>, David Langsford<sup>1</sup>, Jane Willcox<sup>2</sup>

<sup>1</sup>*Northern Health*, <sup>2</sup>*La Trobe University*

**Background:** Low Calorie Diets (LCDs) including meal replacement products achieve significant weight loss results, however there is limited evidence examining safety with dialysis patients or effect on body composition.

**Aim:** To observe the safety of a 12 week LCD and its effectiveness in achieving weight loss and body composition change in dialysis patients requiring weight loss for kidney transplant eligibility.

**Methods:** A prospective, pilot, open-label study of 5 participants prescribed a 12 week LCD incorporating 3 meal replacement products: 100 g lean meat, 2 cups low-potassium, low-starch vegetables and 5 mL oil daily (3.6 MJ, 90 g protein). Measures of safety (blood pressure, dialysis parameters, biochemistry, and medications) and effectiveness (dry weight after adjustment for over-hydration, fat mass and lean tissue mass with Fresenius Medical Care Body Composition Monitor) were monitored.

**Results:** Six participants were recruited, one self-withdrew, five completed the trial (mean 56 years [range, 49-61 years], 4 male 1 female, mean BMI 40 kg/m<sup>2</sup> [30.6-47.9 kg/m<sup>2</sup>]). Two required hospital admissions (fluid overload and atrial fibrillation) and three experienced hyperkalaemia (K<sup>+</sup> 6.0-6.6 mmol/L) but medical assessment deemed unrelated to prescribed diet. All achieved a reduction in dry weight [mean -4.5% (-2.0% to -9.3%)]. Change in fat mass [mean +1.2% (-14% to +21.1%)] and lean tissue mass [mean -8.8% (-29% to +2.9%)] varied. Dietary adherence varied between participants but related to greater fat and lower lean tissue loss.

**Conclusion:** Despite variable adherence, LCD appeared safe in dialysis patients. Further research is required to optimise LCD models, adherence and body composition outcomes.

**Contact Author:** Nadia Obeid - nadia.obeid@nh.org.au

### ID: 68 | Implementation of malnutrition screening in community health using the modified malnutrition screening tool (mMST)

Josephine Pizzinga<sup>1</sup>

<sup>1</sup>IPC Health

**Background:** Malnutrition screening tools are not widely used in the community health setting despite an estimated 4% to 38% of older adults living in the community being malnourished or at risk of malnutrition. In 2011, with this in mind the Dietetics team in a large multi-site community health organisation implemented a malnutrition screening project.

**Aim:** To implement malnutrition screening in a community health setting to identify clients at risk of

malnutrition and increase referral of this client group to the Dietetics service.

**Methods:** A literature search identified the mMST as a suitable screening tool for the community health setting. Use of this tool was rolled out initially with two teams in 2011. It was then mandated in 2013 for most service providers to use annually with clients 18 years and over. Presentations and training at staff meetings, promotional activities including intranet announcements and mMST posters across each campus preceded the rollout. Staff focus groups conducted in 2015 investigated barriers to staff using the mMST, which were addressed.

**Results:** An audit of 217 client files in 2014 demonstrated 54% of files contained mMST forms completed within the previous 12 months. This increased to 69% in 2016. In 2019, less frequent staff training resulted in only 34% of files containing a completed mMST within the previous 12 months.

**Conclusion:** Malnutrition screening can be successfully implemented in a community setting. Regular staff training is required to ensure completion rates are maintained.

**Contact Author:** Josephine Pizzinga - Josephine.Pizzinga@ipchealth.com.au

### ID: 115 | Assessing the efficacy of dietetic telehealth services at IPC Health during the COVID-19 Pandemic

Josephine Pizzinga<sup>1</sup>

<sup>1</sup>IPC Health

**Background:** The COVID-19 pandemic had a significant impact on the mode of healthcare delivery in Australia. Since March 2020 IPC Health offered dietetic consultations via phone and video telehealth platforms. Research into the effectiveness of telehealth in dietetic delivery is limited; however the Dietitian Australia Position statement indicated that telehealth services can be equally effective as traditional face-to-face consultations, specifically in weight, chronic-disease and malnutrition management.

**Aim:** To ensure optimal client-centred care is provided to IPC health clients via the provision of IPC Health dietetic telehealth services. Furthermore, to determine the barriers preventing clients from accessing dietetic telehealth services and benchmark results against other community health services.

**Methods:** Students from La Trobe University surveyed a representative sample of 57 clients seen in July 2020 and 10 dietitians. The same surveys were conducted at Star

Health, with 16 client responses. A total of 12 'Not Ready for Care' clients were surveyed.

**Results:** Key strengths of telehealth appointments included high expressed client satisfaction rates, greater flexibility of consultations, increased attendance, and increased efficiency. Ninety-eight percent of clients identified that the appointment met their expectations, and 44% would continue to use telehealth post-pandemic. Limitations of telehealth included communication barriers, inaccurate anthropometric data, difficulty building rapport, and video platforms not being widely used or encouraged. Results were comparable with Star Health.

**Conclusion:** Dietetic telehealth services provided at IPC Health have been effective in client outcomes, and staff satisfaction to provide client-centred care. Initial consultations, CALD, mental health, and clients requiring anthropometric measurements should be prioritised for face-to-face consultations.

**Contact Author:** Josephine Pizzinga - Josephine.Pizzinga@ipchealth.com.au

#### **ID: 110 | It takes a village: A pilot investigation for Improving MST screening accuracy**

Emily Power<sup>1,2</sup>, Angela Vivanti<sup>1</sup>, Catherine Higgins<sup>1,2</sup>, David Lewis<sup>1,2</sup>, Philip Dickson<sup>1,2</sup>, Mikayla Wyatt<sup>3</sup>  
<sup>1</sup>Princess Alexandra Hospital, <sup>2</sup>QLD Health, <sup>3</sup>Ipswich Hospital

**Background:** Hospital malnutrition is prevalent. Following electronic health record (e-MR) implementation, Malnutrition Screening Tool (MST) scores  $\geq 2$  generated automatic referrals for dietetic review. A significant proportion of MST  $\geq 2$  documented weight loss as 'unsure', despite electronically available weight histories.

**Aim:** This pilot evaluated impact of nurse education on utilising weight history in the e-MR to accurately complete the MST.

**Methods:** Nursing education was completed in two long stay wards by the Dietitian or Dietetic Assistant. Staff feedback was sought regarding presentation learning needs being met (5-point scale "Strongly Agree" to "Strongly Disagree"). MST scoring was audited four weeks pre- and post-education. One ward complemented education with nurse-led implementation strategies supporting nutrition screening.

**Results:** All nurses (100%, n = 21) 'Agreed' or 'Strongly Agreed' regarding presentation learning needs being met irrespective of Dietitian (n = 9) or Dietetic Assistant (n = 12) delivery.

In the ward with nurse-led screening support strategies, referrals decreased by 75% (from 8 to 2 per month) with MST accuracy improving from 38% (3/8) to 100% (2/2) after education. In the other ward, there was a 54% reduction in referrals (from 13 to 6 per month) but no improvement in MST accuracy in referrals received after education alone (62%, 8/13 vs 33%, 2/6 accurate MST).

**Conclusion:** Nurse led strategies appear essential to support accurate MST screening utilising e-MR weight documentation. Results indicate the value of Dietetic Assistant led MST education to reduce inappropriate dietetic referrals, however education alone may be inadequate to sustain accuracy of nurse-completion of MST on long stay wards.

**Contact Author:** Emily Power - ejanep2@yahoo.com

#### **ID: 18 | Feasibility and acceptability of an exercise training and healthy eating group program (ATHENA) for overweight and obese women with urinary incontinence**

Shelley Roberts<sup>1,2</sup>, Zara Howard<sup>3</sup>, Kelly Weir<sup>1,3</sup>, Jennifer Nucifora<sup>3</sup>, Nadine Baker<sup>3</sup>, Leanne Smith<sup>3</sup>, Heidi Townsend, Lynda Ross<sup>1,4</sup>  
<sup>1</sup>Griffith University, <sup>2</sup>Gold Coast Health, <sup>3</sup>Gold Coast Hospital and Health Service, <sup>4</sup>Queensland University of Technology

**Background:** Evidence-based clinical practice guidelines recommend supervised pelvic floor muscle training (PFMT) as first-line treatment for women with urinary incontinence (UI) and weight loss for overweight/obese women with UI. With increased demand on our health service's urogynaecology waitlist, an innovative approach to providing evidence-based care was needed. Our multi-disciplinary team translated UI guidelines into a novel, 12-week group program (ATHENA) for women with UI and implemented this into an existing Women's Health Physiotherapy service at our hospital.

**Aim:** To determine the feasibility and acceptability of the ATHENA group program.

**Methods:** The study was conducted at an Australian public hospital. Participants were overweight/obese women with UI. ATHENA involved: supervised PFMT; general exercise training; and pelvic health and healthy eating education delivered over 12 weeks. Feasibility was assessed via process evaluation of intervention reach, dose and fidelity. Acceptability was assessed using participant satisfaction surveys and semi-structured interviews. Quantitative and qualitative data

were analysed using SPSS and thematic analysis, respectively.

**Results:** ATHENA was considered feasible in terms of reach, dose and fidelity. Survey data indicated high participant satisfaction. Interview data confirmed this, via three themes: (1) patients' journey of change through ATHENA, describing shifts in knowledge, attitudes, behaviours and symptoms; (2) high satisfaction with ATHENA, including educational content, exercise components and delivery style; and (3) group setting integral to ATHENA's success, with participants providing support, building friendships, and facilitating each other's learning.

**Conclusion:** This innovative group model of care for women with UI was feasible to implement and acceptable to patients.

**Contact Author:** Shelley Roberts - s.roberts@griffith.edu.au

### ID: 234 | Innovative dietetic techniques with disability clients

Anna Roesler<sup>1</sup>, Fiona Clarke<sup>1</sup>, Rachel Beinke<sup>1</sup>  
<sup>1</sup>*Innovative Dietitian*

The Innovative Dietitian is a company that provides dietitians to help clients in the disability sector make nutritional change for improved health and wellbeing. But information and opportunities of what is happening and how to best engage clients in this sector is sparse.

**Aim:** To share insights of the nutritional diagnosis of clients in the disability sector and innovative techniques used to engage clients by the Innovative Dietitian.

**Methods:** This project involved collating data on all clients with disabilities seen by the Innovative dietitian between January 2021 and May 2021. Specifically, the following information was gathered, functional incapacity, nutrition diagnosis, case etiology, barriers to change, strategies for change, outcomes, measurement of success and what would be done differently next time.

**Results:** The most common incapacities were intellectual incapacity and sensory impairment. The most common nutrition diagnoses were obesity, followed by food exclusion and malnutrition. In a number of cases, clients were not often able to communicate their needs. Many clients had a lowered IQ and found it difficult to retain information and understand nutrition education. Many clients had impulsive tendencies that contributed to over-eating. Menu planning was a common strategy used by dietitians with clients, and included giving the client a range of healthy menu ideas. Other strategies included

working with carers who worked closely with clients and could help implement plans. For the dietitians, common outcome measures, such as weight, were not used, instead the ability to meal plan and cook a healthy meal, were more often used.

**Conclusion:** There are a range of conditions seen in the disability sector and due to barriers such as a lack of understanding and impulsive desires, it is important dietitians use innovative techniques to support the client.

**Contact Author:** Anna Roesler - aroesler@theinnovativedietitian.com.au

### ID: 17 | Effectiveness of an exercise training and healthy eating group program (ATHENA) for overweight women with urinary incontinence

Lynda Ross<sup>1,2</sup>, Zara Howard<sup>3</sup>, Shelley Roberts<sup>2,4</sup>, Leanne Smith<sup>3</sup>, Nadine Baker<sup>3</sup>, Kelly Weir<sup>2,3</sup>, Jennifer Nucifora<sup>3</sup>, Heidi Townsend

<sup>1</sup>*Queensland University of Technology*, <sup>2</sup>*Griffith University*, <sup>3</sup>*Gold Coast Hospital and Health Service*, <sup>4</sup>*Gold Coast Health*

**Introduction:** Supervised pelvic floor muscle training (PFMT) is first-line treatment for women with urinary incontinence (UI). Weight loss is also recommended for overweight and obese women with UI. Combining PFMT, exercise training and healthy eating into a group program may be an effective way to deliver evidence-based care to the increasing population of overweight and obese women with UI.

**Aim:** To determine the effectiveness of a novel 12-week multi-disciplinary group program (ATHENA) for women with UI.

**Methods:** The study was conducted among women with UI at an Australian public hospital. ATHENA comprised: (1) Supervised PFMT; (2) General exercise training; (3) Pelvic health education; (4) Healthy eating education. Measurements included Australian Pelvic Floor Questionnaire (APFQ), Intuitive Eating Scale-2 (IES-2), Assessment of Quality of Life - 6D scale (AQOL-6D), and bodyweight changes. Pre and post comparisons used descriptive statistics and Wilcoxon Signed Rank Test.

**Results:** A total of 37 women participated: median (IQR) age 53(47-65) years; BMI 30.8(29.1-34.8) kg/m<sup>2</sup>. Twenty-nine (78%) women completed the study. Significant improvements were observed for: APFQ overall dysfunction score and all APFQ domains (bladder, bowel, prolapse and sexual) ( $P < .05$ ); intuitive eating scores for body-food choice congruence ( $P < .01$ ); AQOL-6D dimensions for relationships, coping, pain and independent living ( $P < .05$ ). Median weight-loss was  $-0.7(-1.8$  to  $0.4)$

kg,  $P = .06$ , with 18 (62%) women achieving a decrease in weight.

**Conclusion:** This study provides evidence for the effectiveness of a novel integrative multi-disciplinary model of care for overweight and obese women with UI. Further research on cost effectiveness is recommended.

**Contact Author:** Lynda Ross - l20.ross@qut.edu.au

### ID: 157 | Understanding the barriers and enablers toward adopting a Mediterranean diet in Australian adults

Nicole Scannell<sup>1</sup>, Evangeline Mantzioris<sup>2</sup>, Libby Swanepoel<sup>1</sup>, Anthony Villani<sup>1</sup>

<sup>1</sup>University of the Sunshine Coast, <sup>2</sup>University of South Australia

**Background:** The transferability of a Mediterranean diet in non-Mediterranean populations is appealing. However, little is known about the perceived enablers or barriers toward adherence, particularly in Australia.

**Aim:** To investigate the perceived beliefs, barriers and enablers toward adherence to a Mediterranean diet in Australian adults.

**Methods:** Barriers and enablers were assessed using a self-administered online questionnaire, which included questions aligned with the Theory of Planned Behaviour framework. Qualitative data were analysed using conventional content analysis with participant responses coded and grouped into themes using the core constructs aligned with the Theory of Planned Behaviour.

**Results:** The survey was completed by  $n = 606$  participants. Barriers and enablers toward adherence to a Mediterranean diet were grouped under the three core constructs of the Theory of Planned Behaviour: attitudes (suitability, taste, restrictive, food waste); social norms (food culture) and perceived behavioural control (motivation, affordability, time/effort, food access, knowledge, food outlets, natural conditions, cooking skills). Perceived behavioural control emerged as the most prominent construct influencing intention to follow a Mediterranean diet. Perceived health benefits ( $n = 445$ ; 76.5%) and improved diet quality ( $n = 224$ ; 38.5%) were identified as major advantages. In contrast, dietary adherence ( $n = 147$ ; 39.7%) was perceived as an important disadvantage.

**Conclusion:** Future Mediterranean diet interventions, in both research and clinical settings, should consider adopting strategies aimed at improving self-efficacy to reduce self-perceived barriers in order to facilitate dietary adherence.

**Contact Author:** Anthony Villani - avillani@usc.edu.au

### ID: 111 | Dietitians as partners in promoting sustainable Australian seafood

Nicole Senior<sup>1</sup>

<sup>1</sup>Professional Nutrition Services

**Background:** There is concern about seafood sustainability among dietitians and the broader community, but dietitians are not confident in giving advice in this area. There are conflicting public narratives, and very little science-based information designed for health professionals despite them being in prime positions of influence food choices.

**Aim:** To enhance the knowledge and confidence of dietitians to advise the public on the health and sustainability aspects of seafood. Funding was obtained from the Fisheries Research and Development Corporation (FRDC) for a team of dietitians to produce suite of educational resources that provide evidence-based information.

**Methods:** A needs assessment was conducted with dietitians and selected health and food science professional, and a suite of resources developed. These were disseminated and an evaluation conducted.

**Results:** Online resources were the preferred format. Information and recipes were desired content. A new health professionals page was established on the FRDC website [fishfiles.com.au/experts/healthprofessionals](http://fishfiles.com.au/experts/healthprofessionals) containing a literature review on seafood and health, an online brochure on sustainable Australian seafood and a collection of recipes using sustainable local species. The resources have been endorsed by Dietitians Australia and evaluated positively.

**Conclusion:** The project fulfilled a need of dietitians to have scientific information on which to base their advice. Evidence-based information on seafood sustainability is essential for dietitians to incorporate environmental awareness into their practice and enhance their confidence to deliver dietary advice incorporating environmental sustainability.

**Contact Author:** Nicole Senior - nicolesenior@ozemail.com.au

### ID: 180 | Will financial penalties for hospital acquired malnutrition achieve better patient outcomes?

Jenna Stonestreet<sup>1</sup>, Sally Barrimore<sup>1</sup>, Lynn Hallawell<sup>1</sup>, Karen Atkinson<sup>1</sup>, Jennifer Hall<sup>2</sup>, Jack Bell<sup>2</sup>

<sup>1</sup>The Prince Charles Hospital, <sup>2</sup>Queensland Health

**Background:** The Australian Commission on Safety and Quality in Healthcare defines malnutrition as one of

sixteen hospital acquired complications (HACs). This federal reform aims to drive higher quality and safety patient outcomes by enforcing a financial penalty for episodes of care that incur a HAC. The financial impact of hospital acquired malnutrition is currently unknown.

**Aim:** To determine the economic impact of hospital acquired (HA) malnutrition cases on the organisation.

**Methods:** Confirmed HA malnutrition cases at an Australian tertiary hospital were retrospectively audited between July 2018 and June 2020. Dietitians and Health Information Managers partnered to review the financial penalties of these episodes of care on the health system once risk-adjustment was calculated using Independent Hospital Pricing Authority specifications.

**Results:** Fifty-four patients were diagnosed with HA malnutrition during admission. Eight acute cases (14.8%), attracted a financial penalty totalling a value of \$21,253.26. Financial penalties for twenty sub-acute/non-acute cases (37.0%) were unable to be formulated using dampening factors and risk adjustments. Twenty-six cases (48.1%), although diagnosed with HA malnutrition, avoided financial penalty for the malnutrition HAC due to the patient experiencing another HAC that attracted a greater financial penalty during admission.

**Conclusion:** Approximately half of all HA malnutrition cases in this study attracted a financial penalty. It is important to review all cases of HA malnutrition and not limit review to those that receive a financial penalty. This will foster the identification of drivers for improved quality of care to the most complex of patients.

**Contact Author:** Jenna Stonestreet - jenna.stonestreet1@gmail.com

### ID: 21 | Optimal frequency of individualised nutrition counselling in patients with head and neck cancer receiving radiotherapy: A systematic review

Liana Tunzi<sup>1</sup>, Teresa Brown, Merran Findlay, Judy Bauer<sup>1,2</sup>

<sup>1</sup>University of Queensland, <sup>2</sup>Dietitians Australia

**Background:** Head and neck cancers (HNC) are strongly associated with malnutrition.

**Aim:** To investigate the optimal frequency of individualised nutrition counselling (INC) pre-, peri- and post-treatment for patients with HNC.

**Methods:** Pubmed, EMBASE, Cinahl and Scopus were searched from inception through to April 2020 to identify randomised controlled trials (RCTs) that focused on the INC frequency for adult patients with HNC (Registration no. 178868). Outcomes assessed were nutritional status,

dietary intake, weight change, treatment interruptions, unplanned hospital admissions, quality of life, complications and morbidity. Certainty of evidence was assessed using GRADE.

**Results:** Four RCTs were identified with five manuscripts (n = 500). The certainty of evidence was 'high' for nutritional status and quality of life, 'moderate' for treatment interruptions and unplanned hospital admissions and 'low' for % weight change, complications/morbidity and dietary intake. Compared to control groups, there were consistent improvements for nutritional status, quality of life, treatment interruptions, unplanned hospital admissions, dietary intake, % weight change and morbidity when weekly INC was provided peri-treatment and fortnightly INC was provided post-treatment. No statistical significance was found for treatment interruptions, dietary intake and weight change when INC was provided fortnightly peri-treatment only. There were no RCTs in the current review that offered INC pre-treatment.

**Conclusion:** This systematic review shows beneficial effects with weekly INC peri-treatment and fortnightly INC post-treatment for patients with HNC in all outcomes studied. Future research should focus on models of care to address the optimal frequency of pre-treatment INC as well as the duration of post-treatment

**Contact Author:** Liana Tunzi - liana.tunzi7@gmail.com

### ID: 184 | What is the Waste?: A cross sectional audit of oral nutrition support usage and consumption

Nicholas van Veenendaal<sup>1</sup>, Georgia Moore<sup>1</sup>, Melissa Corken<sup>1</sup>

<sup>1</sup>Eastern Health

**Background:** Oral nutrition support (ONS) is an effective intervention strategy to improve the nutrition status of nutritionally compromised hospitalised patients. Adherence rates to ONS interventions are not routinely audited within our healthcare network. If consumption of ONS is poor, this creates risk of poor resource utilisation and potential poor health outcomes.

**Aim:** To (1) quantify ONS wastage within our network, and (2) investigate the factors contributing to wastage.

**Methods:** A cross-sectional audit was completed across 15 acute and subacute wards. The following methods were used for data collection; (1) audit of meal trays for patients prescribed ONS drinks or pudding-type products quantifying consumption of ONS using a scale in 1/4 increments, (2) self-developed paper based surveys were distributed to patients prescribed ONS exploring the

patient perspective on ONS. Analysis of average volume of ONS wastage was calculated, and categorised as either 'decanted' or 'bottled'.

**Results:** Of 81 supplements provided over two meal times across 15 wards, an average of 70% was consumed. Decanted supplements (n = 66, average consumption 75%) were more likely to be consumed compared to bottled supplements (n = 15, average consumption 45%). Common barriers reported by patients (n = 22) who were not consuming all ONS included taste (43%), receiving too many (22%), too filling (17%), and requiring assistance (17%).

**Conclusion:** This audit demonstrates that ONS wastage is significant within our network. Further efforts are required to explore and test solutions that provide ONS in a way that better meets patients' needs though optimising flavours, dose volume, and eating support.

**Contact Author:** Nicholas van Veenendaal - Nicholas.vanVeenendaal@easternhealth.org.au

### ID: 228 | Addressing childhood obesity in regional Western Australia – An innovative approach

Chris Vavakis<sup>1</sup>, Madeline Freeman<sup>1</sup>  
<sup>1</sup>Better Health Company

**Background:** Obesity is a significant public health issue within Western Australia (WA), with 24.9% of 5 to 17-year-olds classified as overweight or obese. The online version of the Better Health Program (formerly named TEAM Kids) is a ten-week healthy lifestyle program for 7 to 13-year-old children classified as overweight or obese. Participants complete weekly online learning sessions, supported by weekly 30-minute phone-based consultations.

**Aim:** To determine whether a combination of online modules and phone call coaching is a viable option when delivering health interventions in regional Western Australia.

**Methods:** Analysis was conducted on program data, focusing on the impact of the program on participants' dietary and physical activity behaviours, self-esteem and their anthropometric measures. From January to July 2019, 86 children aged 7 to 13 years from regional Western Australia were recruited for TEAM Kids with 69.8% completing four or more coaching calls and four or more online learning sessions. All places on the program were funded by the WA Country Health Service.

**Results:** Significant changes were observed post-program for BMI (−0.70, n = 61), physical activity hours per week

(+7.1 hours, n = 59), self-esteem (+3.7, n = 53) and total nutrition score (+4.9, n = 60) ( $P < .001$ ). In addition, increased consumption of water ( $Z = -4.68$ , n = 60), wholegrain bread ( $Z = -4.92$ , n = 60) and improved overall food variety ( $Z = -5.51$ , n = 59) was observed and found to be statistically significant ( $P < .001$ ). Consumption of discretionary foods were also reduced (n = 60,  $P < .001$ ).

**Conclusion:** These findings demonstrate that a combination of online and phone-based program delivery can be used to provide effective lifestyle interventions in regional areas.

**Contact Author:** Chris Vavakis - chris@betterhealthcompany.org

### ID: 96 | Operationalising remote Nutrition and Dietetics services within a tertiary teaching hospital

Angela Vivanti<sup>1</sup>, Eryn Murray<sup>1</sup>, Ra'eesa Doola<sup>1,2</sup>, Jan Hill<sup>3</sup>

<sup>1</sup>Princess Alexandra Hospital, <sup>2</sup>University of Queensland, <sup>3</sup>Queensland Health

**Background:** COVID-19 provided impetus for public health sectors to optimise remote access to electronic health services for sustaining service delivery.

**Aim:** To highlight considerations and success factors for implementing remote access to support Dietetic service delivery at a tertiary hospital.

**Method:** In response to COVID-19 physical distancing directives and finite departmental space, all dietetic staff obtained remote access to workplace networks and health service applications from March 2020. All staff transitioned to some level of remote work. Most outpatient clinics converted to telehealth. Teams were organised with approximately half the staff delivering both inpatient and outpatient services remotely at any given time. The leadership group's reflections on success factors were collated.

**Results:** Organisational success factors included digital access to applications, electronic health records and availability of telehealth services. Departmental success factors were supported by a culture of success, engagement and innovation. Electronic platforms enabled individual and team meetings to facilitate regular contact. Embedding an electronically accessible location tracker document for listing work locations (department, other hospital site or home) ensured maximum department attendees, including students and researchers, were not exceeded. The document additionally enhanced close contact tracking if required. At a service level, participatory team approaches



identified a range of hybrid models to provide acute, rehabilitation and outpatient services with around half of staff off-site. No adverse events were reported.

**Conclusion:** Factors including digital healthcare, telehealth services, pre-existing positive team culture with solutions adapted to different teams' requirements, makes remote access service delivery feasible for a tertiary teaching hospital.

**Contact Author:** Angela Vivanti - angela.vivanti@health.qld.gov.au

### ID: 207 | Nourishing little minds: A nutrition intervention for children aged 0 to 5 years

Freya Vos<sup>1</sup>, Leanne Elliston<sup>2</sup>

<sup>1</sup>University of Canberra, <sup>2</sup>Nutrition Australia

**Background:** In 2014 to 15, just 5% of Australian children ate sufficient serves of vegetables, and 21% of children aged 5 to 17 years were overweight or obese.

**Aim:** The Nourishing Little Minds programme is a Nutrition Australia ACT initiative designed to expose children to positive healthy-eating messages, to encourage food exploration in a supportive environment, and to build healthful dietary habits among pre-school aged children living in Canberra.

**Methods:** At its midpoint, four cycles of the program have been conducted in partnership with established early childhood literacy programs through Libraries ACT. Two cohorts (0-2 years and 3-5 years) have filled out pre- and post-surveys to date.

**Results:** There was a significant increase ( $P = .003$ ) in the average amount of vegetables consumed each day by those in the 0 to 2 years cohort. Those in the 3 to 5 years cohort experienced significant decreases ( $P = .013$ ) in discretionary serves, as well as increased exposure to literature with healthy food messages at home ( $P = .002$ ). Caregivers of children in the 3 to 5 year cohort reported increased confidence surrounding dietary variety of their children ( $P = .023$ ).

**Conclusion:** To date, the Nourishing Little Minds programme has produced significant, beneficial changes in the dietary intake of pre-school aged children living in Canberra, Australia. These early results indicate that this intervention has potential to provide foundational skills to children and their carers on which to build and maintain healthy dietary behaviours, attitudes, and beliefs, which can be carried through to adulthood.

**Contact Author:** Freya Vos - freyavos@gmail.com

### ID: 30 | Evolution of a Karen refugee supermarket tour: A pilot model

Justine Watts<sup>1</sup>

<sup>1</sup>IPC Health

**Background:** Amongst refugee communities, there is a high prevalence of chronic diseases, including diabetes and cardiovascular disease. Re-settlement factors that contribute include: lack of familiarity with Western foods; limited health education; reduced physical activity, language barriers and poor access to traditional foods. In Wyndham and Hobson's Bay, newly arrived Karen refugees access dietetics frequently to consolidate their nutrition knowledge, and represent a large portion of community health waitlists. A supermarket tour was delivered with a Karen interpreter in 5 weekly sessions and tailored to include Western and traditional foods.

**Aim:** To reduce the number of appointments per dietetic episode of care for refugee communities; and to manage waitlists whilst developing the community's knowledge and confidence to independently make healthy food choices.

**Methods:** In 2018 and 2019, 20 participants attended the supermarket tour ( $n = 20$ ). At 6 and 12 months post tour, the number of review appointments and discharges of participants were compared to 20 Karen people who were engaged in only individual appointments.

**Results:** Six months post the tour, 20% of participants were discharged compared to 5% of clients who didn't attend, and 35% were discharged within 12 months compared to 10% of clients who didn't attend. On average, attendees required half the number of review appointments over a 6 month period, due to repetition of nutrition information.

**Conclusion:** This model reduced the number of appointments required per dietetic episode of care for Karen people. Further research can evaluate the effectiveness of this model with other refugee communities to reduce service waitlists in resettlement areas.

**Contact Author:** Justine Watts - Justine.Watts@ipchealth.com.au

### ID: 36 | What do women want from a postnatal program to promote healthy eating and physical activity?

Shelley Wilkinson<sup>1</sup>, Sheridan Guyatt<sup>2</sup>, Jane Willcox<sup>3</sup>

<sup>1</sup>The University of Queensland, <sup>2</sup>Mater Health, <sup>3</sup>La Trobe University

**Background:** Retention of weight gained during pregnancy contributes to overweight and obesity and consequent chronic disease risk. Programs have been successful in improving diet quality, physical activity levels, and reducing weight retention. However, barriers to program engagement remain.

**Aim:** To identify nutrition and physical activity related topics of interest to women and to identify potential delivery strategies to inform the development of a postnatal digital health program.

**Methods:** This qualitative study utilised semi-structured interviews with women who had a high BMI and had recently become mothers. Interviews explored aspects of diet and exercise, weight changes post-pregnancy, and feelings about interacting with digital health interventions. Interview transcripts were thematically analysed.

**Results:** Nine women were interviewed (average age 33.4 + 4.2 years). Four key themes emerged regarding barriers and enablers for women following a healthy diet, maintaining regular physical activity, and subsequent weight loss post-partum; (a) prioritising baby, family and self; (b) physical and psychological impacts of pregnancy and post-partum (c) family and community support d) planning and preparation. All women reported wanting a postnatal program that supported them to achieve a healthier post-partum lifestyle, supported with a digital approach. Six themes emerged related to the development of the program; (i) purpose, (ii) engagement strategies, (iii) desirable program elements, (iv) blended delivery, (v) program 'messaging', and (vi) by who and how the program was presented.

**Conclusion:** Understanding women's needs and viewpoints for a post-partum diet, physical activity and weight program, allows researchers to design programs to maximise engagement and outcomes.

**Contact Author:** Shelley Wilkinson - sawilkin@hotmail.com

### **ID: 37 | Embedding the txt4two digital intervention into an antenatal service: Facilitators and negotiations**

Jane Willcox<sup>1</sup>, Sheridan Guyatt<sup>2</sup>, Brianna Fjeldsoe, Shelley Wilkinson<sup>1</sup>

<sup>1</sup>La Trobe University, <sup>2</sup>Mater Health, <sup>1</sup>The University of Queensland

**Background:** Optimal antenatal nutrition, physical activity and gestational weight gain (GWG) confer positive maternal and child health outcomes. Increasingly research-driven antenatal mHealth lifestyle interventions are being developed but few have been translated into

clinical care, with implementation barriers and facilitators poorly understood.

**Aim:** To outline experiences of a pragmatic implementation.

**Methods:** txt4two is a multi-modality mHealth intervention aiming to promote healthy nutrition, physical activity and GWG in pregnant women. A pilot RCT (n = 91) demonstrated a significantly lower GWG (7.8 kg ± 4.7 vs 9.7 kg ± 3.9; *P* = .041) and smaller reductions in physical activity (*P* = .001). Following the pilot, a tertiary antenatal hospital is pragmatically implementing and evaluating a tailored version of txt4two, employing the RE-AIM model. Modifications include a comparison of three modes of introduction and embedding txt4two modalities into current digital platforms. Stakeholder group discussion and an open-ended email delivered question elicited facilitators and areas negotiated in implementing txt4two.

**Results:** Facilitators were: implementation focus of txt4two and robust implementation plan, early inclusion of key stakeholders, service-embedded research dietitian, health services redesign priority embracing digital disruption. Negotiations were: intellectual property ownership and transactions, legal agreements across institutions, refocusing intervention towards women's unique needs, technology infrastructure, additional ethics requirements for digital delivery, health professional digital intervention views.

**Conclusion:** Pragmatically implementing an mHealth intervention into routine clinical care presents unique challenges. As we move beyond pilots and embed digital research programs within services, these data further the dialogue for implementation science.

**Contact Author:** Shelley Wilkinson - sawilkin@hotmail.com

### **ID: 126 | Evidence use in the development of the Australian Dietary Guidelines**

Kate Wingrove<sup>1</sup>, Mark Lawrence<sup>1</sup>, Cherie Russell<sup>1</sup>, Sarah McNaughton<sup>1</sup>

<sup>1</sup>Deakin University

**Background:** Dietary guidelines are increasingly informed by evidence derived from dietary patterns research. This type of evidence takes into account the different quantities, varieties, and combinations of foods that people consume. However, challenges associated with the synthesis of evidence from dietary patterns research may limit the use of this type of evidence in dietary guideline development.

**Aim:** To explore the advantages, disadvantages, and practicalities associated with the synthesis and

translation of evidence derived from nutrient-based, food-based and dietary patterns research in dietary guideline development.

**Methods:** A qualitative descriptive study design was used. Purposive sampling methods were used to recruit people involved in development of the 2013 Australian Dietary Guidelines. Members of the Dietary Guidelines Working Committee, the Review Leadership Team and the Review Project Team were eligible to participate. Semi-structured interviews were conducted online or over the phone. Transcripts were analysed thematically using an open coding technique.

**Results:** Twenty-two interviews were conducted. Participants reflected on the evidence reviews that were conducted to inform the 2013 guidelines. The advantages and disadvantages of using evidence from nutrient-based, food-based and dietary patterns research to inform future dietary guidelines were identified. The practicalities associated with conducting original systematic reviews for the purpose of dietary guideline development were also described.

**Conclusion:** The results of this study can be used to inform the evidence reviews that will underpin the next iteration of the Australian Dietary Guidelines.

**Contact Author:** Kate Wingrove - k.wingrove@deakin.edu.au

### ID: 6 | Social factors, not nutrition, at the centre of health and wellbeing for Australian resettled refugees from Myanmar

Carrie Wong<sup>1</sup>, Annie-Claude Lassemillante<sup>1</sup>, Carolynne White<sup>2</sup>, Regina Belski<sup>1</sup>

<sup>1</sup>Swinburne University of Technology, <sup>2</sup>MIND

**Background:** Humanitarian migrants from Myanmar represent a significant refugee group in Australia, and we are only beginning to understand the challenges they face during settlement. Recent research has identified the role of social factors as an influence on health, however their specific influences of these on the health and wellbeing amongst Australian-settled refugees from Myanmar remains under-explored.

**Aim:** To explore the influence of social factors on health and wellbeing from the perspectives of Australian resettled refugees from Myanmar.

**Methods:** In a qualitative study using a Community-based Participatory Research (CBPR) approach, 27 participants were recruited from a government funded English language program. Data collected from four focus groups were analysed using thematic analysis.

**Results:** Key themes identified included: (1) Health according to the perspectives of Australian resettled refugees from Myanmar and what they did to maintain it; (2) Social connections and the role it plays in health; (3) Work as a key influence on health; and (4) Education and its links with work and health.

**Conclusion:** This study outlined the inter-relationships between health, social connections, work and education from perspectives of refugees from Myanmar as well as the strengths employed to attain health. As practitioners, we should recognise the social determinants of health and their impacts on health, the strengths inherent to all groups including 'vulnerable communities' in problem solving and initiating change, as well as advocate for a more collaborative cross-sector approach to meet service needs and gaps of refugees.

**Contact Author:** Carrie Wong - ckwong@swin.edu.au

### ID: 40 | World War II service by pioneering Victorian dietitians

Beverley Wood<sup>1</sup>

<sup>1</sup>Deakin University

**Background:** From 1929, 58 pioneering Dietitians had been trained in Victoria by the peak of World War II (1942), when at least 12 Victorians (20%) enlisted for War Service. The profession of dietetics was only 13 years old and Dietitians were being employed for the first time by many organisations, including the military forces.

**Methods:** Available records were reviewed.

**Results:** Records indicate that most of the enlisted Victorian Dietitians had received their training in the Diploma of Institutional Management (Emily McPherson College of Domestic Economy); others were graduates of the University of Melbourne. All had achieved a one-year post-graduate qualification in dietetics. Their service records indicate that most enlisted from 1942 for 3 to 4 years. The responsibilities of service Dietitians were essentially the same as those of the civilian dietitians, that is, to establish dietary departments and to control catering arrangements. The Army required the application of military hospital patient food ration scales in food production, which facilitated cost control. Clinical dietetics was very important. Most of the patients had severe medical problems, and needed encouragement to eat. Some had previous illnesses (peptic ulcers, diabetes) and many others had acute diseases and injuries which were not usually found in civilian hospitals. Men with extensive gunshot wounds to the head and neck, required extensive facio-maxillary plastic surgery and significant nutritional care for long periods.

**Conclusion:** The early Dietitians gained in reputation, stature and experience.

**Contact Author:** Beverley Wood - woodbe4@bigpond.com

**ID: 7 | Investigating the relationship between anthocyanin intake and indices of memory and cognition in older adults with mild cognitive impairment: A cross-sectional analysis**

Maziar Yousefi<sup>1</sup>, Karen Charlton<sup>2</sup>

<sup>1</sup>Blue Sky Health, <sup>2</sup>University of Wollongong

**Background:** Dietary intake of anthocyanins has been linked with improved indices of cognition and memory. However, the association between cognitive performance and anthocyanin intake in older adults with mild cognitive impairment has not been well studied.

**Aim:** To investigate the relationship between anthocyanin intake and indices of memory and cognition in older adults diagnosed with mild cognitive impairment.

**Methods:** Association between anthocyanin intake and indices of cognition was assessed using Spearman correlations in 40 participants with mild cognitive impairment

who were recruited to a randomised clinical trial. Cognitive performance (including memory) was assessed using a battery of tests including the Rey Auditory Verbal Learning Test and baseline dietary data were gathered using 3-day food records that were analysed for anthocyanin content using the PhenolExplorer food composition database.

**Results:** Median intake of anthocyanins was 5.3 (25th percentile = 0.03, 75th percentile = 32.2) mg/day. Participants who were consuming higher levels of anthocyanins had less verbal forgetting ( $r = -0.476$ ,  $P = .002$ ) and had better recall after a short delay and distractor list ( $r = 0.340$ ,  $P = .032$ ).

**Conclusion:** The recognised association between anthocyanin intake and indices of cognition in older adults with mild cognitive impairment warrants further research with larger sample sizes.

**Contact Author:** Maziar Yousefi - maziar.616@gmail.com

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