

Nutrition & Dietetics

Journal of Dietitians Australia

Volume 79 Supplement 1 September 2022

**Dietitians Australian 2022 Conference
Be Bold, 14–16 August 2022
Adelaide, Australia**

The contents contained herein are correct at the time of printing and may be subject to change.

This abstract supplement has been produced using author-supplied copy. Editing has been restricted to some corrections of spelling and style where appropriate. No responsibility is assumed for any claims, instructions, methods or drug dosages contained in the abstracts: it is recommended that these are verified independently.

WILEY

Nutrition & Dietetics

Journal of Dietitians Australia

Volume 79 Supplement 1 September 2022

ISSN 1446-6368

Editorial	5
Oral Presentation Abstracts	6
Poster Presentation Abstracts	69
Author Index	98

Nutrition & Dietetics

Journal of Dietitians Australia

Editor in Chief

Judi Porter, PhD, MHSc, MCFSM, GCHPE, GDipNutDiet, BAppSc, FDAA
Deakin University, Australia

Editor

Dianne Reidlinger, PhD, RD, APD
Bond University, Australia

Statistics Editor

Marijka Batterham, PhD, MMedStat, MSc, BSc, GStat, AdvAPD, AN
University of Wollongong, Australia

Systematic Literature Review Editor

Elizabeth Neale, PhD, BND (Hons), APD
University of Wollongong, Australia

Clinical Trials Editor

Sharleen O'Reilly, PhD, GCHPE, BSc(Hons), APD
University College Dublin, Ireland

Editorial Board Members

Lucinda Bell, BND (Hons) PhD APD
Flinders University, Australia
Andrea Braakhuis, PhD, RD
The University of Auckland, New Zealand
Clare Corish, PhD, FINDI, RD
University College Dublin, Ireland
Suzie Ferrie, PhD, CNSC, AdvAPD
Royal Prince Alfred Hospital, Australia
Vicki Flood, PhD, MPH, APD
University of Sydney, Australia
Janelle Gifford, PhD, MSc, BSc, BBus, Adv APD, Adv Sports Dietitian
Core Nutrition, Australia
Kathryn Hart, PhD, BSc(Hons), DipADP, RD
University of Surrey, United Kingdom
Ingrid Hickman, PhD, BHSc, AdvAPD, AN
Princess Alexandra Hospital, Australia
Vasant Hirani, PhD, DDiet, MSc, BSc(Hons), APD
University of Sydney, Australia
Tilakavati Karupaiah, PhD, APD, AN
Taylor's University, Malaysia
Nicole Kiss, PhD, MNutDiet, BSc, AdvAPD
Deakin University, Australia
Evangeline Mantzioris, PhD, BND, BSc, Grad Cert High Educ, APD, AN, SDA
University of South Australia, Australia
Claire Palermo, PhD, MPH, MNutDiet, BSc, FDAA
Monash University, Australia
Kirrilly Pursey, PhD, APD
University of Newcastle, Australia
Anna Rangan, PhD, GDipNutrDiet, BSc, APD
University of Sydney, Australia
Lynda Ross, PhD, BND (Hons Class 1), AdvAPD
Griffith University, Australia
Jane Scott, PhD, MPH, Grad Dip Diet, BSc, AdvAPD, FDAA
Curtin University, Perth, Australia
Nerissa Soh, PhD, BMedSc, MNutDiet, APD, AN
University of Sydney, Australia
Sze-Yen Tan, PhD, MSc, APD, AN
Deakin University, Australia
Helen Truby, PhD, M.Hum Nutr, AdvAPD
Monash University, Australia
Robin M. Tucker, PhD, RD
Michigan State University, United States of America
Shelley Wilkinson, PhD AdvAPD
University of Queensland, Australia
Serene Yoong, PhD, BNutDiet(Hons), APD, AN
Hunter New England Local Health District, Australia
Adrienne Young, PhD, BHLthSci (Nut&Diet) (Hons), AdvAPD
Royal Brisbane & Women's Hospital, Australia

Jo Zhou, PhD, MNutDiet, BSc, DipMed, APD
Women's and Children's Hospital Adelaide, Australia

2022 Scientific and Social Program Committee

Annabelle Wilson *Chair*
Sara Forbes *Vice Chair*
Alison Yaxley
Hannah Rogers
Morgan Pankhurst
Louisa Matwiejczyk
Kaitlin Ellis
Sally Moloney *Marketing and Communications General Manager*
Jo Wheeler *Conference Support Officer*
Julian Grobler *Marketing and Member Engagement Manager*

Emerging Dietitians Sub-Committee

Hannah Rogers *co-Chair*
Kaitlin Ellis *co-Chair*
Clare Flower
Bridget Arneric
Emma Davidson

Conference Management Committee

Annabelle Wilson, Chair, Scientific and Social Program Committee 2022
Robert Hunt, Chief Executive Officer
Sally Moloney, Marketing and Membership Administration Manager
Jo Wheeler, Conference and Awards Support Officer

Abstract Reviewers 2022

Melissa Armstrong, St Vincent's Hospital Sydney
Lauren Atkins, OnCore Nutrition
Eleanor Beck, University of Wollongong
Andrea Begley, Curtin University
Andrea Bramley, La Trobe University; Monash Health
Leanne Brown, University of Newcastle
Glenn Cardwell
Peter Clark, Griffith University
Zoe Davidson, Monash University & Murdoch Children's Research Institute
Amanda Davis, Queensland Eating Disorder Service
Susan de Jersey, Metro North Hospital and Health Service
Julie Dundon, Nutrition Professionals Australia
Vicki Flood, University of Sydney
Adrienne Forsyth
Rachel Freeman, ADEA / Stride Health
Kay Gibbons
Janelle Gifford, University of Sydney
Roslyn Giglia, Foodbank WA
Sara Grafenauer, UNSW
Tilakavatri Karupaiah, Taylor's University
Amber Kelaart, Nutrition Australia
Jane Kellett, University of Canberra
Kelly Lambert, University of Wollongong
Cathy Latino, Fiona Stanley Hospital
Lesley MacDonald-Wicks, The University of Newcastle
Louisa Matwiejczyk, Flinders University
Cameron McLean, St George Hospital
Sarah McNaughton, Deakin University
Lana Mitchell, Griffith University
Louise Moodie, Mackay Hospital and Health Service
Caitlin Murray
Anita Needham, University of Wollongong
Marie-Claire O'Shea, Griffith University
Claire Palermo, Monash University
Anna Rangan, University of Sydney
Anne Schneyder, Nutrition Professionals Australia
Jane Scott, Curtin University
Judith Seal
Robynne Snell
Nerissa Soh

Jenna Stonestreet, Queensland Health
Anne Swain, RPAH
Wendy Swan
Caroline Tuck, La Trobe University
Paige van der Pligt, Deakin University
Karen Walton, University of Wollongong
Fiona Willer, Queensland University of Technology
Julie Williams, Department of Health, Tasmania
Lauren Williams, Griffith University
Annabelle Wilson, Flinders University
Alison Yaxley, Flinders University
Adrienne Young, Royal Brisbane & Women's Hospital,
The University of Queensland
Jo Zhou

Journal Strategic Planning Committee

Robert Hunt
Rebecca Mete
Judi Porter (Chair)
Dianne Reidlinger

Dietitians Australian 2022 Conference: Be Bold, 14 – 16 August 2022, Adelaide, Australia

Cover image courtesy of Simon O'Donnell (<http://simontakesphotos.com/>)

Address for Editorial Correspondence:

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

Disclaimer: The Publisher, Dietitians Australia and Editors cannot be held responsible for errors or any consequences arising from the use of information contained in this journal; the views and opinions expressed do not necessarily reflect those of the Publisher, Dietitians Australia and Editors, neither does the publication of advertisements constitute any endorsement by the Publisher, Dietitians Australia and Editors of the products advertised.

For submission instructions, subscription and all other information visit <http://wileyonlinelibrary.com/journal/ndi>

COPYRIGHT AND COPYING (IN ANY FORMAT)

Copyright © 2022 Dietitians Australia. All rights reserved. No part of this publication may be reproduced, stored or transmitted in any form or by any means without the prior permission in writing from the copyright holder. Authorization to copy items for internal and personal use is granted by the copyright holder for libraries and other users registered with their local Reproduction Rights Organisation (RRO), e.g. Copyright Clearance Center (CCC), 222 Rosewood Drive, Danvers, MA 01923, USA (www.copyright.com), provided the appropriate fee is paid directly to the RRO. This consent does not extend to other kinds of copying such as copying for general distribution, for advertising or promotional purposes, for republication, for creating new collective works or for resale. Permissions for such reuse can be obtained using the RightsLink "Request Permissions" link on Wiley Online Library. Special requests should be addressed to: permissions@wiley.com

EDITORIAL

It has been my privilege to work with an enthusiastic and forward-thinking SSPC, alongside the team at Dietitians Australia (DA), who together have shared a vision of creating a conference that encourages us to **Be Bold** in dietetics. I am thrilled that as a profession we can come together on Kurna Country, after 2 years of virtual conferences, and I acknowledge Traditional Owners and Elders past, present and emerging for enabling us to do so.

To be bold is to challenge the status quo; it is to sit with discomfort in order to learn and extend ourselves and our practice; it is to ask hard questions and if there is a better way that we could do things. Being bold requires us to be courageous and to take risks, both personally and as a profession. As dietitians, our personal and professional selves are intricately interwoven and our conference subthemes are designed to engage with these concepts.

In this post-COVID world, there has never been a more important time to *nurture*. In the world of working from home, lockdowns, isolation and experiencing the virus, for many people the personal and the professional have become inseparable. Therefore we must ensure that we take time to look after and *nurture* ourselves. In 2022, there has also never been a more important time to *nurture* the world around us and consider how we can address environmental issues through our dietetic practice and research.

Eleven years ago we last gathered in Adelaide to consider the conference theme 'Evidence to practice – not always black and white' which highlighted that translation of evidence to practice is not simple and 'one size does not fit all'. In 2022, we take this point to a new level with our subtheme *extend*. Through this plenary, we will highlight that every individual must *extend* their practice by asking 'how am I personally going to demonstrate in my practice that one size does not fit all? How am I going to embrace challenge and discomfort, to *extend* beyond what I know and reflect this in my practice?' To *extend* requires us to use reflexivity and notice our reactions to situations; to change the way that we practice based on what we notice. And as a profession, how can we *extend*

our current scope of practice, use evidence as a form of leverage to *extend* our work and expand into areas where dietitians have not typically had a presence?

And after a process of extending ourselves, we must then *emerge* on the other side. When we *emerge*, we bring with us our past experiences and our new learnings from the process of extension. How do we emerge after we have embarked on new areas that progress our practice? How do we reconcile our past experiences with new learnings? In the context of the COVID-19 pandemic, we must also ask ourselves as a profession, how will nutrition and dietetics *emerge* from the COVID-19 pandemic – what will we take forward, what will we leave behind, and what will change?

Finally, there are some areas to which extra attention has been paid during this conference. First, Aboriginal and Torres Strait Islander health. With the release of the new DA Competencies, and the release of DA's third Reconciliation Action Plan (Innovate), there has never been a better time for all dietitians to **Be Bold** and *extend* their knowledge of and practice in Aboriginal and Torres Strait Islander health. The time has come for Aboriginal and Torres Strait Islander perspectives and knowledges to be integrated into DA core business; for all dietitians to *extend* themselves through using reflexivity to reflect on their own positionality and experience in Aboriginal and Torres Strait Islander health and *emerge* to a new level of practice. With multiple Aboriginal and Torres Strait Islander plenary speakers at this conference, a dedicated workshop and a concurrent session stream, delegates will be supported to do this. Second, rural and remote health. The skills, diversity and resilience of rural and remote dietitians will be showcased at this conference through a dedicated symposium and throughout the concurrent sessions.

I look forward to meeting you in Adelaide, and to sharing a journey where we can all **Be Bold**.

Annabelle Wilson, Associate Professor, SSPC Chair, PhD

*College of Medicine and Public Health,
Flinders University, Australia*

ABSTRACT**Dietitians Australia 2022 – Oral Presentations****ID: 140 | Foods to limit: exploring terminology shifts in national food-based dietary guidelines**

Kim Anastasiou¹, Patricia Ribeiro de Melo¹, Scott Slater¹, Gilly Hendrie², Phillip Baker¹, Michalis Hadjikakou¹, Mark Lawrence¹

¹Deakin University, ²CSIRO

Background: Food-based dietary guidelines (FBDGs) have played a key role in food policy and nutrition education since the mid-20th century. Terms and definitions used to describe foods have the potential to provide clarity or confusion on foods viewed as ‘healthy’ or ‘unhealthy’ and can impact nutrition policy success.

Aim: To describe the terms used and definitions given to ‘foods to limit’ in FBDGs, including changes over time and regional differences, to inform future research and policy decisions.

Methods: The FAO database was searched to identify past and current FBDGs. Terms used to describe ‘foods to limit’ in all current and past official national FBDGs for adults were grouped, definitions were extracted, and data were compared for changes across time and place.

Results: Definitions were provided for less than one-quarter of terms. Nutrient-based terms were the most frequently used type of term in current and past FBDGs (91%, 85% respectively). However, the use of ‘examples of foods’ and ‘processing-related’ terms has increased in the past 20 years and are now used in conjunction with nutrient-based terms. The use of processing-related terms has increased in all world regions (except for Africa) and are currently used in 26% of FBDGs.

Conclusion: The lack of clear definitions, use of conceptually muddled terminology and terms which are poorly understood by consumers indicated that choosing clear terms and definitions should be prioritised in future FBDGs. Decisions on terms should be made free from industry influence, and consider suitability for policy, public messaging and research.

Contact Author: Kim Anastasiou, kanastasiou@deakin.edu.au

ID: 71 | A virtual placement day to improve preparedness in response to the COVID-19 pandemic

Amanda Anderson¹, Evelyn Volders¹, Lisa Barker¹, Emily Robertson¹, Melanie Myers¹

*Monash University*¹

Background: Work integrated learning is core to competency-based assessment however the COVID-19 pandemic and subsequent lockdowns in 2020 and 2021 changed course design and delivery, impacting on preparedness for clinical placement. In an attempt to ameliorate these disruptions, a virtual placement day was developed as a collaborative project between the university and the clinical placement sector. This was delivered during the orientation program prior to clinical placement.

Aim: To improve preparedness for long clinical placement via a communication package utilising a scenario of a patient with dementia. Further aims included exposing students to person centred care, prioritisation of care, utilisation of alternative strategies to collect assessment data, documentation and reflection.

Methods: In conjunction with a clinical placement partner, an authentic case was developed and trialled by a single student before converting to an on-line learning platform. It was estimated to take 6 h in total to complete the case including a reflection and action plan. The case was undertaken by 42 students in 2022, with the reflection and action plan submitted for analysis.

Results: Preliminary results suggest students highly valued the experience, felt prepared for placement and requested more virtual cases for different scenarios.

Conclusion: The next phase of the project is to increase the interactivity and virtuality, especially with interprofessional components. The model could be used for different cases in diverse practice settings. Evaluation of educators’ perception of student preparedness for placement will be measured once placement begins.

Contact Author: Amanda Anderson, amanda.anderson@monash.edu

ID: 137 | Dietitians in a regional setting extending scope of practice: Inserting and managing nasogastric tubes

Rhonda Anderson¹, Laure Baumgartner², Kara Cronin², Nina Meloncelli³

¹Sunshine Coast Hospital and Health Service, ²Cairns and Hinterland Hospital and Health Service, ³Metro North Hospital and Health Service

Background: In late 2017, the Cairns and Hinterland Hospital and Health service commenced an extended scope of practice service of individually credentialed dietitians inserting and managing nasogastric tubes (NGT).

Aim: To evaluate its objectives of providing a timely and safe model of care.

Methods: Data were collected using an audit tool at each occasion of service between March 2018 and March 2020. A staff survey was conducted to assess acceptability of the service.

Results: During the audit period, there were 38 unique occasions of NGT insertions by dietitians, of which 31 (82%) were successful. Four insertions were required by a Medical Officer using more advanced techniques and on one occasion a nurse completed the NGT insertion. Two were unsuccessful. There were five complications at time of insertion.

On average, it took a dietitian 25.5 (SD 14.1) minutes from decision to insertion, and 1.7 (1.3) attempts. Of the 38 occasions of service, 33 were inpatients and five were outpatients. Four of the five outpatient insertions occurred during scheduled nutrition reviews. Overall, staff ($n = 8$) ranked the model of care as excellent ($n = 6$) or good ($n = 2$).

Conclusions: Dietitians inserting and managing nasogastric tubes is accepted within extended scope of practice and is proposed as a safe, value-based model of care. We demonstrated improved efficiencies as the majority of occasions of service occurred during scheduled nutrition reviews thereby decreasing need to refer to other services. Further evaluation of this service will include patient and staff satisfaction.

Contact Author: Rhonda Anderson, rhonda.anderson@health.qld.gov.au

ID: 194 | A novel dietetic response to support diverse nutrition needs of COVID-19 patients in home-based care

Emma Armstrong¹, Jazmin Brooks¹, Caitlin Maccana¹, Hilda Griffin¹

¹The Royal Melbourne Hospital

Background: Good nutrition is essential to support recovery from COVID-19. A novel, virtual nutrition service was implemented at a tertiary Melbourne hospital in response to the 2021 Delta COVID-19 wave. The clinic serviced patients in 'home-based' hospital programs and post-hospital discharge.

Aim: To characterise the cohort and nutrition needs of service users.

Method: Data were prospectively captured for patients accessing the service over a 3-month period. Data included demographics, Body Mass Index (BMI), weight loss, hospital/critical care admission for COVID-19, presence of nutrition impact symptoms, nutrition status as determined by an Abridged Subjective Global Assessment (SGA) and type of nutrition intervention.

Results: Twenty-eight ($n = 28$) patients were referred to the service. Sixteen (57%) were female. Median age 49.5 years (IQR 39.5–65.3). Eighteen patients had a hospital admission, four of these requiring critical care. Median length of stay was 6 days (IQR 3–10.5). Referral indications included weight-loss, NIS, reduced oral intake, nutrition education and food insecurity associated with isolation requirements.

Anthropometric data were captured in 19 patients (68%). Median BMI was 27.32 kg/m² (IQR 25.7–33.5). Sixteen patients (57%) had unintentional weight loss (median 7% body weight, IQR 4.8–8.3). Sixteen patients (57%) reported ≥ 1 nutrition impact symptoms. Abridged SGAs were completed for 79% ($n = 22$), 45% were diagnosed with malnutrition. Ten patients (36%) had type-2 diabetes mellitus, four were insulin-dependent. Four patients had food insecurity requiring meal delivery.

Conclusion: The virtual COVID-19 nutrition clinic was novel and enabled dietitians to provide timely, patient-centred care supporting diverse patient needs.

Contact Author: Emma Armstrong, Emma.Armstrong@mh.org.au

ID: 54 | Feeding in the context of sibling children: A grounded theory study

Susannah Ayre¹, Holly Harris², Melanie White¹, Rebecca Byrne¹

¹Queensland University of Technology, ²University of Cambridge

Background: Interventions that promote responsive feeding in early childhood have been shown to reduce obesity risk. However, interventions mostly target parent-child dyads without considering the complexities of feeding multiple children within a family unit.

Aim: To extend existing knowledge on feeding relationships by exploring how mealtimes are enacted in families with more than one child.

Methods: This mixed-methods study was undertaken in South East Queensland. Preliminary data were collected from $n = 11$ families, comprising of mealtime observations, semi-structured interviews, field notes, and memos. Data were analysed using constructivist grounded theory methods of open and focused coding, and constant comparison.

Results: The sample included two-parent households with siblings aged 12 to 67 months (mean age difference = 24 months). A model was generated to explain transactional feeding processes in the sibling context. Parents may adapt their feeding practices in response to the individual characteristics of siblings, and mediate dynamics between them to facilitate or limit their food intake. Within a family unit, how parents feed each sibling is also interdependent, operating through processes such as resource dilution and learnt experience, and eliciting certain spill-over effects.

Conclusions: The findings elucidate the complexities of feeding that give shape to the overall family food environment. The theoretical model emerging from the data highlights intricate processes that may explain how parents coordinate mealtimes and manage feeding in the sibling context. This model has the potential to inform the design of family-based feeding interventions that aim to nurture the development of healthy eating behaviours during early childhood.

Contact Author: Susannah Ayre, susannah.ayre@hdr.qut.edu.au

ID: 85 | 'What Do Older Victorians Want?' Opportunities to optimise nutrition in hospitals

Jess Barry¹, Jessica Cecil¹, Amy Parker¹, Frances Batchelor¹, Andre Catrice², Nicole Doran²

¹National Ageing Research Institute, ²Department of Health Victoria

Background: Older people's healthcare priorities are rarely considered in the development of health systems, research or policy. This project was undertaken to address this gap. Nutrition is important for older people for chronic disease prevention and management and age-related nutrient requirements. It is well-known that nutritious eating in hospital is important yet barriers still exist.

Aim: To explore what is important to older Victorians (aged 65 and above) in regards to their healthcare and quality of care including nutritious food and food service in hospital.

Methods: A mixed methods approach was employed including focus groups ($n = 63$), social media

consultation ($n = 13$) and an online, state-wide survey ($n = 386$) across metropolitan and regional Victoria. Participants were asked about their experience of, and preferences regarding, healthcare including acute hospital care.

Results: Hospital food was considered inadequate, both in meeting nutritional needs and being palatable. Participants noted a lack of mealtime assistance and food packaging that could be easily opened. Food and food service management were linked to concerns about quality hospital care including; being listened to, being treated with dignity/respect and receiving treatment in a timely manner.

Conclusions: Healthy eating, enjoyment of food, and motivation to eat influence recovery and maintenance of health when in hospital. Older people recognised this, yet reported that little has changed in their lifetime to improve hospital food quality and service. This provides an impetus to policymakers to improve access to, and the provision of, hospital food that is visually appealing, palatable and nutritious in order to optimise health.

Contact Author: Jess Barry, j.barry@nari.edu.au

ID: 7 | Dietitians' knowledge, skills and attitudes regarding caring for older adults in aged care: Scoping review

Karly Bartrim¹, Roshan Rigby¹, Wendy Moyle¹, Lauren Ball¹

¹Griffith University

Background: The 2021 Royal Commission identified that the dietetic workforce needs to grow in size and capacity to provide optimal care for older Australians. However, little is known about dietitians' working with older adults in their homes or aged care.

Aim: To synthesise dietitians' knowledge, skills and attitudes regarding working with older adults (>65 years) in aged care and in-home care services.

Methods: A systematic literature search was conducted to identify studies that examined any aspect of dietitians' or student dietitians' knowledge, skills and attitudes working in-home care services or aged care. No restrictions were applied to methodological design, language, location, or year of publication. Studies were assessed for quality using Johanna Briggs Institute Quality Appraisal Tools. Study findings were analysed using meta-synthesis.

Results: Seventeen studies met the inclusion criteria. All studies explored dietitians' attitudes towards their role, three studies examined perceived knowledge, but no

studies explored dietitians' skill levels. Five themes were developed inductively: (1) recognising their contribution as dietitians, (2) lacking clarity about the boundaries of their role, (3) all team members have a role to play in nutrition care, (4) assumptions and biases about older people and (5) needing to build capacity in the workforce.

Conclusions: Dietitians have mixed attitudes about working in RACF and home care services. Future directions include evaluating dietitians' role, knowledge and skills in RACF, reviewing education and practical opportunities for student dietitians, and assessing the impact mandated dietitian hours have on an older person's dietary intake and nutrition.

Contact Author: Karly Bartrim, k.bartrim@griffith.edu.au

ID: 100 | Caregiver perspectives on nutrition, weight and the design of a weight management program for Duchenne muscular dystrophy

Natassja Billich¹, Paula Bray¹, Helen Truby^{1,2}, Maureen Evans³, Monique Ryan^{3,4}, Kate Carroll^{1,3}, Katy de Valle, Daniella Villano, Andrew Kornberg, Bianca Sowerby, Michelle Farrar, Manoj Menezes^{5,6}, Sandra Holland⁷, Rachel Lindeback, Anita Cairns, Zoe Davidson¹

¹Monash University, ²University of Queensland, ³The Royal Children's Hospital, ⁴University of Melbourne, ⁵University of Sydney, ⁶Children's Hospital at Westmead, ⁷Sydney Children's Hospital

Background: Obesity disproportionately affects children and adolescents with Duchenne muscular dystrophy (DMD) and has consequences on disease progression.

Aim: This study explored barriers, enablers, attitudes and beliefs about nutrition and weight management and consulted caregivers on designing a tailored weight management program.

Methods: We surveyed caregivers of boys with DMD from four Australian paediatric neuromuscular clinics. The development of the survey was informed by the Theoretical Domains Framework (TDF) and explored barriers and enablers to nutrition and weight management. Caregivers' were also asked to preference features of a weight management program tailored for families living with DMD. Data were analysed descriptively.

Results: Fifty-three caregivers of 59 boys with DMD completed the survey. Almost half (48%) perceived their son as above healthy weight. Consequences of higher weight included self-consciousness (71%) and impact on self-esteem (64%) and movement (57%). Preventing weight gain was a common reason for providing healthy food and healthy eating was a high priority for families.

Reported barriers to nutrition included: time constraints, selective food preferences, deficits in nutrition knowledge and insufficient DMD-specific nutrition information provided in clinical settings. Caregivers preferred a whole of lifestyle approach, intensive (weekly), short (6 weeks) weight management program including managing appetite and screen time.

Conclusions and Future Directions: Managing weight is an important issue for caregivers of boys with DMD; nutrition knowledge, time constraints and food preferences are common barriers. This survey has informed a feasibility and acceptability study which implemented the co-designed program: The Supporting Nutrition and Optimising Wellbeing Program (SNOW-P).

Contact Author: Natassja Billich, natassja.k.billich@gmail.com

ID: 61 | A cross sectional study of dietetic graduate outcomes in Australia and New Zealand

Merran Blair¹, Claire Palermo¹, Simone Gibson¹, Lana Mitchell²

¹Monash University, ²Griffith University

Background: The employment landscape for dietitians is uncertain due to the paucity of employment outcomes data. Graduate outcomes data can assist in matching training to employment opportunities and community needs. These data can also establish if dietetic graduates obtain employment in their desired field or if employment is opportunistic in nature.

Aim: To identify where dietetic graduates were being employed and if this employment was in their desired field.

Methods: An online survey was distributed to graduates from 24 accredited dietetic programs in Australia and New Zealand. Individuals who completed their degree in 2020 were eligible to participate at four to 6 months post degree completion. Descriptive statistics were analysed and summative content analysis was conducted on qualitative data.

Results: The response rate was 47%, with 294 usable responses from 631 eligible graduates. Three-quarters of respondents (75%) were employed, and 60% of respondents were employed in a position requiring their dietetics degree. Private practice was the most common area of dietetics employment (28%), followed by hospital (19%). Whereas 48% reported their preferred field was hospital, followed by private practice (33%). Forty-four percent of graduates reported having at least one job in their preferred field.

Conclusions: The results of this survey are important for workforce planning and curriculum development to ensure training is appropriate for employment opportunities. It is important to communicate to potential students where graduate opportunities exist. Ongoing data collection is necessary to see if this changes over time.

Contact Author: Merran Blair, merran.blair@monash.edu

ID: 180 | Local government policies on healthy food promotion and obesity prevention: A national Australian survey

Miranda Blake¹, Devorah Riesenber², Tara Boelsen-Robinson¹, Anna Peeters¹, Adrian Cameron¹

¹Deakin University, ²Cancer Council NSW

Background: Local governments (LGs) often own sporting facilities and can promote health in these settings by implementing healthy food policies. To date, no national studies on nutrition-related and/or obesity prevention policies or practices of LGs have been undertaken in Australia.

Aim: To assess the policies, attitudes and practices of Australian LGs relating to obesity prevention and the provision of healthy food in sporting facilities.

Methods: In July 2020, all 539 Australian LGs were invited to complete a cross-sectional survey. We assessed LG priorities for obesity prevention, promoting healthy eating and public health on 11-point scales, and presence of healthy food policies in sporting facilities. Wilcoxon rank-sum tests or Kruskal-Wallis tests compared priorities of LG subgroups by socioeconomic position, remoteness, population, and number of LG-owned sporting facilities.

Results: 203 (38%) LGs completed the survey. Improving public health was a high priority; obesity prevention and promoting healthy eating were medium priorities. 22% LGs reported the priority given to promoting healthy food had increased over the previous year and stayed the same in 65%. 10% LGs had a healthy food and drink policy in sporting facilities, with 32% having made changes without a policy. LGs in major cities, with larger populations and more facilities reported having made more healthy changes at their facilities.

Conclusions: Promoting health is a priority for Australian LGs, but very few have policies relating to the food environments in their sporting facilities. Ongoing monitoring is important to assess changes over time and identify LGs where greater support is required.

Contact Author: Miranda Blake, miranda.blake@deakin.edu.au

ID: 178 | Influencing rural allied health employment through positive clinical placements. A systematic review

Amanda Borowski¹, Rachel Bacon¹, Jane Kellett¹, Maegan Wilson¹

¹University of Canberra

Background: Allied health professionals in rural and remote areas of Australia are scarce. This is negatively impacting the health outcomes of these populations. Rural clinical placements are thought to positively influence an allied health student's decision to seek work in rural Australia post-graduation however, the specific aspects that positively influence intentions are not well understood.

Aim: To determine what aspects of rural clinical placement positively influenced an allied health student's intentions, decisions, or opportunities for an outcome of rural employment post-graduation.

Method: In accordance with the PRISMA guidelines, 4 databases (CINAHL, MEDLINE, Web of Science and Scopus) were systematically searched for studies published from 01 January 2016. Articles not directly related to rural employment intentions or outcomes and those not including a clinical placement by allied health students from an Australian accredited university course completed in a rural setting of at least a 2-week duration were excluded.

Results: 501 results, with 8 studies eligible for inclusion. Analysis identified three themes that were consistently linked to student placement satisfaction and positively influenced their rural work intention, post-graduation. The themes are: (a) Supportive learning environment; (b) Availability of financial assistance for students; and (c) Community connectedness.

Conclusion: Development of rural clinical placement programs that appropriately consider aspects identified as creating a positive placement experience for allied health students, coupled with creating increased voluntary placement opportunities within locations where allied health workforce shortages have been identified, could be a worthwhile opportunity to reduce the health care gap in rural Australia.

Contact Author: Amanda Borowski, u3003706@uni.canberra.edu.au

ID: 30 | Enhancing dietetic student placement assessment using entrustable professional activities: A validity and educational impact study

Andrea Bramley¹, Adrienne Forsyth², Lisa McKenna²

¹La Trobe University; Monash Health, ²La Trobe University

Background: Health professions including physiotherapy, occupational therapy and speech pathology use nationally recognised tools for student placement assessment. Dietetics lacks such a tool; supervisors must navigate different tools, portfolios and processes when supervising students developing Nutrition Care Process (NCP) skills resulting in inefficiency, decreased feedback effectiveness and stress. A recently developed placement assessment tool using entrustable professional activities (EPAs) linked to NCP and the National Competency Standards (NCS) may address this gap, however, evidence of construct validity and educational impact is required.

Aim: To determine construct validity and educational impact of an EPA-based assessment tool for use in clinical placements.

Methods: Action research was used to develop, implement and evaluate a web-based placement assessment tool using EPAs linked to NCS and NCP. Supervisor and student self-assessment data from three cohorts of students from 2017–2019 ($n = 145$) were collected and analysed. Descriptive statistics and linear mixed model analysis determined construct validity and identified areas of NCP where students may need additional support (educational impact).

Results: Student performance increased over time in 35 out of 37 EPAs. When student self-assessment and supervisor assessment were compared, statistically significant differences were found in 9 out of 37 EPAs. Student performance varied across EPAs with 88.2% of students achieving work-ready performance in nutrition management compared to 100% for professionalism EPAs.

Conclusion: Construct validity of the EPA-based tool was established. EPAs identified NCP skills where students required more support. This tool offers potential to enhance student placement assessment with benefits to students, supervisors and dietetic education.

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

ID: 161 | Regulating plant-based haem iron in analogues of meat

Emma Breen¹

¹Food Standards Australia New Zealand

Background: A plant-based 'haem iron' was developed to provide analogues of meat with the iron content, flavour and aroma of meat. A pre-market approval was required.

Aim: To assess the question, should soy leghemoglobin be permitted in analogues of meat?

Process: A quantitative and qualitative assessment was undertaken of *in vitro*, *in vivo*, animal and human studies to determine the safety and purpose of soy leghemoglobin preparation. In the absence of *in vivo* studies, a qualitative nutrition assessment considered the likely bioavailability of the soy leghemoglobin in the intended food matrix, while a quantitative dietary intake assessment reviewed likely consumption levels. Consumer understanding of analogues of meat was reviewed in the literature.

Outcomes: Internationally, soy leghemoglobin was found to have a history of safe use since 2016. The liquid preparation contains residual proteins and genomic DNA from the genetically modified production strain. Assessment of the soy leghemoglobin preparation did not indicate allergic, pathogenic or toxicological concerns. Available evidence suggested haem iron from soy leghemoglobin would have similar bioavailability to haem iron from mammalian haem proteins. Consumers will not likely exceed the upper level of intake for iron. Evidence did not suggest consumers are being misled by analogue products.

Conclusions: The assessment found no public health or safety concerns with soy leghemoglobin in analogues of meat at requested levels. Soy leghemoglobin was permitted as a form of haem iron at a maximum use level of 0.8% w/w in raw product. Future food produced using cell-culture technology can be assessed using a similar process.

Contact Author: Emma Breen, emma.breen@foodstandards.gov.au

ID: 182 | Auditing Instagram to nurture ethical and professional use

Alisha Brighton¹, Kelly Squires², Lisa Urquhart³, Lucy Kocanda, Susan Heaney⁴

¹NSW Health, ²University of Newcastle Department of Rural Health, ³University of Newcastle, ⁴University of Newcastle, Department of Rural Health, Port Macquarie

Background: A popular destination for health communication, social media is used by 95% of Australian dietitians, with one in four using online platforms to directly market themselves, products, or services. Guidelines and professional codes of conduct exist to support ethical and professional use of social media. However, it is unclear whether dietitians' and student dietitians' use of social media align with these standards.

Aim: To audit dietitian and student dietitian's Instagram accounts to describe and model ethical and professional social media use.

Methods: Instagram profiles and recent posts were audited against purpose-developed criteria collated from relevant literature for content and ethical and professional use. Descriptive data analysis informed the development of exemplar posts to model ethical and professional use.

Results: Fifty Instagram profiles and 250 posts were audited. Dietitians mostly posted diet, health, or exercise information and product or service promotion. Students mostly posted recipes, food inspiration, and professional advocacy information. Most profiles and posts were done well. Areas for improvement for both groups included identifying specific interest areas, advertising transparency, and evidence-based information. There is an additional area of improvement for students to provide balanced and accurate information.

Conclusions: There appears to be a lack of clarity and awareness around the ethical and professional use of social media. With the evolving nature of social media platforms, using practical tools, such as exemplar posts, to role model ethical and professional standards is essential to ensure flexibility in providing ongoing education and resources in these emerging environments.

Contact Author: Alisha Brighton, abrighton1012@gmail.com

ID: 196 | A nutrition assistant-lead standardised nutrition intervention pathway for COVID-19 inpatients

Jazmin Brooks¹, Emma Armstrong¹, Hilda Griffin¹

The Royal Melbourne Hospital

Background: COVID-19 infection is associated with risk of malnutrition due to increased nutrition requirements and reduced dietary intake. A nutrition assistant-led standardised High Energy High Protein (HEHP) diet intervention for inpatients with COVID-19 was implemented during peak hospital admissions in November 2021 at a large tertiary Melbourne hospital. It included a single 1.5 kcal/ml oral nutritional supplement (ONS) and provided an additional 815 kcals and 35 g protein.

Aim: To evaluate the effectiveness of this intervention.

Methods: Inclusion criteria were medical inpatients with COVID-19 on the intervention pathway for >24 h, who had not been assessed by a dietitian. Data collected included demographics, length of stay (LOS), malnutrition risk as per the Malnutrition Screening Tool (MST); and ONS consumption over 72 h.

Results: Fifty-six percent ($n = 14$) of the ward admissions met the inclusion criteria. Eight (57%) were female,

median age was 72 years (IQR: 68–75) and median LOS was 9 days (IQR: 7–15). Four patients (30%) were identified as MST >2. Average daily consumption of the ONS was 55.9% (224 kcals and 7 g protein). Patients with a low risk of malnutrition consumed an average of 46% (92 kcals/5.6 g protein) of the ONS. Patients with a moderate risk of malnutrition consumed 83% (249 kcal, 103 g protein). Those with high malnutrition risk (MST 3 or above), consumed 50% of the ONS.

Conclusion: A nutrition assistant-led ONS HEHP dietary intervention may be a safe and effective first-line dietary strategy for COVID-19 inpatients' with a low or moderate risk of malnutrition and length of stay <7 days.

Contact Author: Jazmin Brooks, Jazmin.Brooks@mh.org.au

ID: 55 | Nurturing dietetic students in a rural year-long immersion program to influence return to rural practice

Leanne Brown¹, Susan Heaney¹, Elesa Crowley², Kelly Squires¹, Lisa Urquhart¹, Julie Burrows¹

¹University of Newcastle, ²Tamworth Rural Referral Hospital and University of Newcastle Department of Rural Health

Background: Despite growth in the dietetics workforce, challenges in achieving adequate services in non-metropolitan areas remain. Encouraging health graduates to practice rurally has been a focus of the University Department of Rural Health program for more than 20 years. Outcomes from a year-long rural immersion program are the focus of a longitudinal student follow-up study.

Aim: To describe and evaluate the rural immersive placement program for Bachelor of Nutrition and Dietetics students over a 12-year period.

Methods: A mixed-methods longitudinal study collected student placement experiences and workplace location data at 1, 3 and 5-years post-graduation. Semi-structured interviews were conducted with students on longer-term placements. Student immersion program numbers and proportions of graduates working rural or remote are reported. The influence of rural placement on career plans was analysed thematically.

Results: Seventy-eight dietetic students completed a year-long rural immersion, with an additional ten students undertaking a semester-long option. From 2011, students who undertook placements of at least 10 weeks duration have been followed-up, 47 at 1-year, 53 at 3-years and 36 at 5-years post-graduation. Of those

employed within the profession, 91.5% ($n = 43$), 88% ($n = 22$) and 78.6% ($n = 11$) respectively, many were working in non-metropolitan locations (39.5%, 45.5% and 54.5% respectively). Four qualitative themes were developed: extended career options, broadened horizons for work location, attraction to rural life and emerging opportunities for practice.

Conclusions: Opportunities for extended rural immersion beyond short-term placements provides dietetic students with diverse and high-quality experiences that may nurture the development of the dietetics workforce outside metropolitan areas.

Contact Author: Leanne Brown, leanne.brown@newcastle.edu.au

ID: 175 | Lupin's health benefits as a novel addition to the diet

Lesley Bryant, Anna Rangan¹, Sara Grafenauer²

¹University of Sydney, ²UNSW

Background: Lupin has a unique nutrition profile within the legume family and may have beneficial effects on health when included in the diet.

Aim: To investigate the effects of lupin consumption on a range of health outcome measures.

Method: Databases included MEDLINE, Embase and CINAHL, and focused on controlled intervention studies on healthy adults and those living with chronic disease such as type 2 diabetes, cardiovascular disease and overweight. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses protocol was followed. Included intervention diets utilised whole lupin, lupin protein or lupin fibre, and health outcomes were determined by measurements of chronic disease markers, body weight or satiety. Quality of study results was assessed using the Cochrane revised risk of bias tool.

Results: Twenty-one studies comprising 998 participants were included: 12 tested whole lupin, four its protein and five studies tested lupin fibre. Beneficial changes were observed in 71% of studies that monitored blood pressure, 83% that measured satiety and 64% measuring serum lipids. Unintended weight loss occurred in 25% of studies. Whole lupin interventions demonstrated more consistent beneficial effects for satiety, glycaemic control and blood pressure than lupin protein or lupin fibre.

Conclusion: Further studies are required to strengthen the evidence for lupin's health effects, and these should focus on the whole lupin. Future research should clearly identify the species of lupin and test in quantities that could feasibly be included in a normal diet.

Contact Author: Lesley Bryant, lesley.haley.bryant@gmail.com

ID: 138 | Standardised post-operative diet upgrade process implementation barriers: Conflicting responses from Australian and New Zealand survey

Angela Byrnes¹, Kate Glen¹, David Clark¹, Adrienne Young²

¹Royal Brisbane and Women's Hospital, ²The University of Queensland

Background: Early return to oral diet post-colorectal surgery is recommended in international guidelines, however frequency of implementation and sustainment of standardised post-operative diet (SPOD) processes in Australian and New Zealand hospitals is unknown.

Aim: To identify hospitals with successful implementation to understand key success factors.

Methods: A cross-sectional survey was distributed to Australian and New Zealand hospitals in October–November 2020 via surgical, dietetic and nursing professional mailing lists and forums. The survey, administered online via Qualtrics, included questions about the presence and process of a SPOD.

Results: Overall, 71 surveys were completed (52 surgeons, 14 dietitians, 5 nurses) from 42 different public hospitals across Australia ($n = 38$) and New Zealand ($n = 4$). Sixteen hospitals had >1 survey returned from individual clinicians. Eighteen sites (43%) reported having a SPOD process, 17 (40%) reported no process, and seven (17%) had conflicting reports by clinicians from the same hospital, indicating internal disagreement about presence of a SPOD process. Of the 18 sites with a SPOD process, three had multiple respondents complete additional questions which demonstrated internal disagreement about diet level of first post-operative oral intake (2/3 sites), what day solid diet is allowed (2/3 sites), and who decides to commence/upgrade diet (1/3 sites).

Conclusion: Communication and teamwork issues are evident in surgical units completing this survey, given disagreement in responses between clinicians within the same surgical unit. As a key enabler of implementation success, communication and teamwork will need to be addressed by multidisciplinary surgical teams as part of the implementation process.

Contact Author: Angela Byrnes, angela.byrnes2@health.qld.gov.au

ID: 167 | A novel liquid ingredient for fortifying foods; evaluation and costs**Danielle Cave**¹, Karen Abbey¹, Sandra Capra¹*The University of Queensland*

Background: Food fortification is a common food-first nutrition support strategy to increase protein and energy in food and beverages, however current ingredients lack versatility across the menu in residential aged care.

Aim: To identify opportunities for menu item fortification with two ingredients (powder or liquid) and to gain an understanding of residents' opinion to identify acceptable fortified food. The research question guiding the enquiry was: are food fortification ingredients easy to use, economical, acceptable and versatile for foodservice in residential care settings?

Methods: A modified meal assessment tool (MMAT) was used across three residential care settings to test tea, coffee, juice, milkshake, custard, yoghurt, porridge and soup fortified with either the powder or liquid ingredient. The MMAT used a 7-point Likert scale and the criteria included; taste, appearance and comparison with expectation. The cost of the fortified food was determined by calculating the cost of ingredients and labour per serve.

Results: A total of 8 item pairs were tested with 15 participants. Of the 24 tested constructs (3 per pair), food fortified with the liquid ingredient were rated better (≥ 0.5 difference in score, $n = 12$) or equal (< 0.5 difference, $n = 11$) across the MMAT criteria. On-site fortification with either ingredient cost less (\$0.59–\$1.43 per serve) than purchasing pre-made 1 kcal/ml beverages at \$1.95/serve.

Conclusions: A novel liquid fortification ingredient is an easy to use, economical, acceptable and versatile product. Dietitian-nutritionists need to be bolder in promoting the use of personalised food-first nutrition support strategies in this setting.

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

ID: 230 | Determining the gross energy of foods at GCUH using oxygen bomb calorimetry**Claire Chapman**, Ben Desbrow¹, Chris Irwin¹, Shelley Roberts^{1,2}¹Griffith University, ²Gold Coast Health

Introduction: The dietary intake of hospitalised patients affects clinical outcomes, hence it is critically important that dietitians can accurately assess patients' energy intakes.

Aim: To directly measure the energy content of foods/beverages supplied to patients by Gold Coast University Hospital (GCUH) foodservice and compare these to manufacturers' reported values.

Methods: Bomb calorimetry was used to determine the energy content of 59 food/beverage items (~48% of total menu items) using validated sample preparation procedures. Measured energy values were then compared to manufacturers' labels. Equivalence between measured values and manufacturers' reports were determined by comparing the measured mean $\pm 90\%$ CI to a $\pm 20\%$ threshold in allowable calorie variance. Food items were considered equivalent when the CI of the measured values fell within this threshold.

Results: 17 (29%) items had measured values that were considered not equivalent to the manufacturers' value. Of these, 10 exceeded manufacturers' energy values (highest mean = 176% of manufacturer's report). Seven items were lower than manufacturer's reports (lowest mean = 61% of manufacturer's report). Non-equivalent items came from four food groups and four different diet codes however, foods exclusively prepared for the smooth-pureed menu had the least accuracy (60% non-equivalency).

Conclusions: This study found manufacturers' reported energy content of food items supplied via GCUH foodservices often failed to reflect directly measured values. Given the importance of understanding caloric intake and provision to hospitalised patients, this level of inaccuracy is concerning and warrants determination of the remaining items.

Contact Author: Claire Chapman, afflated.claire@gmail.com

ID: 23 | Improving access to dietetic services for people with psychosocial disabilities**Miranda Charlwood**¹, Courtney Nelson¹¹Gateway Health

Background: Dietitians funded under the Victorian Government's Home and Community Care Program for Younger People support individuals who need assistance to manage nutrition related activities of daily living due to a disability (for which they are ineligible for the NDIS), chronic illness or short-term health needs. Currently, eligibility screens focus on difficulties related to physical impairments and therefore people with psychosocial disabilities frequently go undetected or are deemed ineligible to access Dietetic support under this funding model.

Aim: To develop a screening tool to assist in identifying people with psychosocial disabilities who struggle with nutrition related daily living tasks and may benefit from access to a Dietitian.

Methods: A literature review was conducted to identify suitable existing screening tools and/or indicators of functional impairment due to psychosocial disabilities. Databases searched included; PubMed, Wiley, CINAHL, Academic Search Ultimate and Medline. Current screening tools and other mental health screens were also analysed. Stakeholder interviews ($n = 15$) were facilitated to gather qualitative information to inform the literature review and development of the screening tool.

Results: A screening tool was developed using a 4 response Likert scale, consisting of 13 questions which incorporate functional and psychosocial aspects related to activities of daily living.

Conclusions: The resultant screening tool will assist in identifying individuals with psychosocial disabilities who may benefit from access to a Dietitian to improve their capacity to manage nutrition related activities of daily living. Further trial and evaluation of the screening tool is required to determine effectiveness.

Contact Author: Miranda Charlwood, miranda.charlwood@gatewayhealth.org.au

ID: 117 | How is Aboriginal and Torres Strait Islander nutrition and dietetics research framed in Australian literature?

Emma Chittleborough¹, Robyn Delbridge¹,
Annabelle Wilson¹

¹Flinders University

Background: Prior to colonisation Aboriginal and Torres Strait Islander peoples used detailed knowledges on food and nutrition to develop sustainable practices which supported a strong and healthy lifestyle. Initial colonisation interrupted these practices as access to traditional resources was denied. Today, the ongoing effects of colonisation have resulted in significant nutrition-related health inequities among Aboriginal and Torres Strait Islander peoples. Research plays a key role in alleviating these inequities, however, current nutrition and dietetics literature has been reported to be to be deficit based, and therefore acting as a barrier for improving health outcomes.

Aim: To explore how Aboriginal and Torres Strait Islander peoples are portrayed in the discourse of nutrition and dietetics literature, how these portrayals legitimise and perpetuate oppressive framing and the implications of this for Aboriginal and Torres Strait Islander peoples' health and nutrition.

Methods: This study used critical discourse analysis to investigate the discourses present in 30 peer-reviewed studies relating to Aboriginal and Torres Strait Islander nutrition and dietetics.

Results: Four prominent themes were identified following analysis including: problem describing, comparison, acknowledgment of colonisation and inclusion of Aboriginal and Torres Strait Islander perspectives. These results indicate that deficit discourse dominates nutrition and dietetics literature and there is an evident lack of strengths-based discourse.

Conclusions: Due to the resulting contribution to internalised racism, institutionalised racism and the perpetuation of colonisation, this study brings awareness to and emphasises the importance of challenging these discourses to produce more effective and sustainable solutions to nutrition-related health inequities.

Contact Author: Emma Chittleborough, emmachittleborough@outlook.com

ID: 64 | Update on the systematic review of the incidence and/or prevalence of eating disorders in individuals with food allergies

Daniela Ciciulla¹, Victoria Soriano¹, Rachel Peters¹,
Vicki McWilliam¹, Jennifer Koplin¹

¹MCRI

Background: Chronic diseases involving strict dietary adherence have an increased risk of eating disorders (ED). This is the first systematic review investigating ED prevalence in populations with food allergies.

Aim: To systematically report the prevalence/incidence of ED and the types of ED observed in individuals with food allergies.

Methods: Following PRISMA guidelines, we searched four databases for studies published to January 2022. IgE and non-IgE-mediated food allergic populations with prevalence data on any type of ED were included. Risk of bias was assessed and evidence qualitatively synthesised.

Results: From 1180 published papers identified, nine met inclusion criteria. There were 4161 adult and paediatric participants with IgE-mediated food allergies or eosinophilic esophagitis (EOE). Avoidant Restrictive Food Intake Disorder (ARFID) or anorexia/bulimia nervosa were the main EDs screened. ED prevalence in food allergic populations ranged from 0.8% to 62.9%. Two papers included a healthy control, revealing lower prevalence of anorexia/bulimia nervosa in the control group compared to food allergy (0.6% vs. 0.8% and 21% vs. 41.3%). In IgE-mediated food allergy, anorexia/

bulimia, ARFID or any ED prevalence was 17.6%–61%, 62.9% and 0.8%–6% respectively. In EOE cohorts, ARFID prevalence was 4.5%–51%. Most studies were limited by small sample size, selection bias and lack of diagnostic ED tools validated for food allergic populations.

Conclusion: Larger studies with healthy control groups and validated measures to identify both food allergy and ED are needed to accurately determine the prevalence and risk of ED in food allergic individuals.

Contact Author: Daniela Ciciulla, daniela.ciciulla@gmail.com

ID: 228 | Minimum reporting standards for Australian primary care dietitians. What do bold thought leaders agree on?

Peter Clark¹, Lauren Williams¹, Lauren Ball¹

¹*Griffith University*

Background: Recent Australian data demonstrated that >50% of new graduates employed work in primary care (often called private practice). There is no uniform system for minimum data collection for dietitians in primary care. Standardised datasets would enable greater monitoring and evaluation of client outcomes and improve quality care through workforce efficiencies.

Aim: To develop minimum reporting standards for assessing the processes and outcomes of Australian primary care dietetics practice.

Methods: A novel sequential, mixed-method, exploratory process called Delphi Plus. Peer-nominated Australian dietitians and data experts considered ‘Thought Leaders’ undertook a series of semi-structured qualitative interviews. Content analysis of the interviews was combined with a literature review to develop a comprehensive group of published and practised items. Two rounds of modified-Delphi surveys were conducted with these Thought Leaders to seek consensus on the most relevant items. Individual items with a Content Validity Index of >0.78 attained excellent validity and form evidenced-based minimum reporting standards for practice.

Results: Twenty-six Thought Leaders (response rate: 87%) from all mainland Australian states completed a qualitative interview and two rounds of modified-Delphi consensus surveys. Content analysis identified 216 items published or used in practice by Thought Leaders. After two rounds of consensus review, 97 items (45 business, 33 clinical and 19 implementation) achieved excellent consensus ratings and combined would form a standardised tool for assessing nutritional care.

Conclusions: Evidence-based minimum reporting standards for process and outcome assessments for dietetic practice in Australia were identified. Further research needs to validate the standards in practice and quantify their impact on measuring dietetic care.

Contact Author: Peter Clark, peter@healthieryou.net.au

ID: 94 | The emerging role of Nutrition and Dietetic Allied Health Assistants in Queensland: 2011–2021

Denise Cruickshank¹, Jenna Stonestreet¹

¹*Queensland Health*

Background: Allied Health Assistants (AHAs) are providing increasing clinical support to Allied Health Professionals in a climate of rapidly increasing healthcare demand with finite resourcing. Tracking numbers, locations, qualifications and tasks undertaken by AHAs in Nutrition and Dietetics over time across Queensland, has supported development of relevant training and support networks.

Aim: To review and compare Nutrition and Dietetics AHA positions across Queensland Health over three time periods, assessing changes to position numbers, reporting, qualifications and tasks.

Methods: Point in time surveys using multiple choice, question grids and free text were administered in 2011, 2015 and 2021 to all Nutrition and Dietetics Departments in Queensland Health. Analysis identified trends over time.

Results: Dietitians and Dietetic Assistant positions increased over time but not consistently across facility location or size. Percentages of assistants with qualifications increased (43%, 57%, 69% respectively) with those with bachelor degrees in Nutrition or Nutrition and Dietetics increasing significantly – from one to 23. An increase in the percentage of positions reporting to Dietetics – 42%, 60% and over 90% was noted. Types of tasks completed by AHAs has steadily moved from menu management tasks to direct clinical support with sites reporting AHAs collecting meal choices from 100% to less than 80% over 10 years. Establishment of an AHA network meeting monthly via video conference has seen increased engagement of AHAs with professional development.

Conclusions: Enabling access to certified training, scheduled networking and role sharing has enabled nurturing of an emerging, increasingly educated clinical support workforce in Queensland Health.

Contact Author: Denise Cruickshank, denise.cruickshank@health.qld.gov.au

ID: 102 | Treatment of iron deficiency in primary practice: A potential opportunity for dietitians

Hayley Cullen¹, Kasha Spokes¹, Dean Smith¹, Philippa Lyons-Wal¹, Therese O'Sullivan¹

¹Edith Cowan University

Background: Iron deficiency is the most common mineral deficiency in Australia and worldwide, with a substantial cost to society and individuals. Treatment of iron deficiency in the primary care setting in Australia has not previously been compared to current guidelines.

Aim: To investigate how Australian general practitioners (GPs) treat patients with iron deficiency, in order to inform future training and identify potential opportunities for dietetic support.

Method: We administered an online Qualtrics questionnaire with 24 questions, distributed to currently practicing, registered GPs in Australia. Responses were compared to current clinical guidelines and best practice.

Results: 249 GPs responded to the questionnaire (65% female), with most working in a small group practice (49%). Oral iron supplements were correctly identified as the standard first treatment option by 60% of respondents, while 37% opted for dietary changes initially. One in five GPs replied that there had been an intramuscular iron injection in their practice recently, despite the practice being no longer recommended. There were 20 GPs (8%) who responded that they had recommended iron therapy without confirmation of iron status, for instance if a patient had needle phobia.

Conclusions: Although dietary changes are the only sustainable method of preventing recurrence of iron deficiency, they should be recommended in addition to initial iron therapy, not in place of it for initial treatment, as the time required to rebuild ferritin stores can take several years. Our findings suggest that dietitians can play a key role in future GP education and training.

Contact Author: Hayley Cullen, hcullen0@our.ecu.edu.au

ID: 254 | Building the capacity of dietitians to respond to the needs of people with disability

Sayne Dalton¹, Kathryn Toohey¹, Jim Valavanis², Sharon Boyce³, Michelle Sedgman⁴, Sue Gebert⁵, Libby Kent⁶, Cristina Thompson⁷, Rebecca Mete¹, Karen Walton⁷, Tracylee Arestides²

¹Dietitians Australia, ²Australian Federation of Disability Organisations, ³Discovering Disability and Diversity, Aus Inclusion, University of Southern Queensland, Institute of Inclusive Education, ⁴Living Visible, ⁵Your Community Health, ⁶Quality Health Matters, University of Wollongong

Background: People with disability experience multiple barriers to access of high-quality mainstream health services, leading to poorer health and wellbeing outcomes compared to people without disability. One major barrier is the lack of education and training available to upskill health professionals to meet the needs of people with disability. Dietitians Australia partnered with the Australian Federation of Disability Organisations to address this gap through the development of an education program for dietitians.

Aim: To enhance the knowledge, skills and confidence of dietitians to respond to the needs of people with disability.

Methods: This project employs a multi-phase, mixed method design to develop and implement an educational program to support dietitians to respond to the needs of people with disability. A needs assessment was conducted to identify project priorities including a rapid desktop review, focus groups and interviews with people with disability, family and carers, and a survey of dietitians. A theory-based education program is under-development including 5-module online course, series of online workshops and a supervision program.

Results: Five education priorities were identified around the themes of person-centred care, communication, knowledge, access and collaboration. Consultation with people with disability, family and carers, and dietitians is essential for the co-design of effective dietetic disability education.

Conclusions: Implementation is planned for September 2022. Process, formative and summative evaluations will be undertaken. This project will build the capacity of dietitians to respond to the diverse needs of people with disability and improve access to high-quality dietetic services in mainstream health settings.

Contact Author: Sayne Dalton, sdalton@dietitiansaustralia.org.au

ID: 246 | Students' voices at the centre: Expanding education in uncomfortable spaces around disordered eating

Janeane Dart¹, Christie Bennett^{1,2}, Charlotte Barber¹, Maree Lymbouris, Claire Palermo¹

¹Monash University, ²Eat Love Live

Background: Nutrition and dietetic students have a high prevalence of eating disorders (ED), disordered eating

(DE) and body image disturbances. It has been proposed that nutrition and dietetic pedagogy potentially promotes DE. Surprisingly, there is no research on curricula approaches to address these factors and support students.

Aim: To determine what impacts can be achieved from a one-off co-designed seminar in supporting students' exploration of DE.

Methods: Students co-designed and promoted the session among undergraduate nutrition and postgraduate dietetics students. The session, presented via Zoom included presentations from a psychologist, new graduate and credentialled ED dietitian with lived experience. The session was evaluated via a qualitative anonymous survey. The results of the survey were analysed via thematic analysis.

Results: Students identified particular activities completed as part of the curriculum, which triggered DE behaviours. Some students identified the session as confronting, others empowering and it helped to reduce the isolation they had experienced. Students also reflected on benefits of seeking psychological support to address their own food and/or body stigma, and a wider need to remove the stigma and expand discussions in this area for nutrition and dietetic students.

Conclusions: This one-off seminar allowed students to address a documented occupational hazard in an environment that fostered a sense of belonging and validation. Educational interventions such as this, could be used to bridge a gap between harm and solution and work to reduce stigma of DE in the dietetic community.

Contact Author: Janeane Dart, janeane.dart@monash.edu

ID: 177 | Does capsascins 'beige' human white fat and improve mouse metabolism?

Sarah Davis¹, Jenny Gunton¹

¹Westmead Institute for Medical Research

Background: Reproducibility in science can be problematic. Therefore, a repeat experiment was conducted to validate previous data, prove reproducibility and increase statistical power.

Brown/Beige fat activation is a target for new obesity treatments. Brown adipose tissue is a thermogenic organ which expresses uncoupling protein 1. When activated it can increase total daily 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 immuno-suppressed mice (to avoid rejection). Mice were fed ad libitum normal chow or a high fat diet (45% calories from fat) \pm 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_2 and vO_2) 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 to optimise browning.

Contact Author: Sarah Davis, sdav9312@uni.sydney.edu.au

ID: 127 | The Impact of moulage on learners' experience in simulation-based education and training: Systematic review

Stacia DCosta¹, Grace Zadow¹, Dianne Reidlinger¹, Gregory Cox¹, Jessica Stokes-Parish¹

¹Bond University

Background: Moulage is used in health and emergency worker training, predominantly for simulation-based learning activities. It is not used in dietetics, despite the potential relevance to skill development in identifying micronutrient deficiencies and malnutrition assessment.

Aim: To examine the use of moulage in simulation-based education, focusing on learner experience.

Methods: Four electronic databases (PubMed, CINAHL, Embase, Proquest Central) were systematically searched to October 2021, for studies utilising moulage in simulation-based education experiences, reporting outcomes that focused on learner satisfaction, confidence, immersion, engagement, performance or knowledge. Two researchers independently completed screening and assessed the quality of included studies using the Mixed Methods Appraisal Tool.

Results: 19 papers ($n = 7490$) were included in the final review. Studies were largely conducted on medical

professionals, one in allied health, and none in dietetics. Multiple studies reported greater learner satisfaction (3 of 4 studies), confidence (3 of 7 studies), and immersion (2 of 3 studies) when moulage was used against a comparator group. Minimal improvements in knowledge and performance were identified. Eight studies reporting qualitative findings were consistent in highlighting benefits for learner experience.

Conclusion: Moulage may contribute to a valuable learner experience in simulation-based education or training. Further research utilising moulage across a broader range of professions and ethnicities, with interventions based on pedagogical/learning frameworks or theories is recommended. Investigating the use of moulage in dietetics to improve learners' experience within simulation-based activities is warranted.

Contact Author: Stacia DCosta, stacia.dcosta@student.bond.edu.au

ID: 5 | A contemporary approach to nutrition and food education in schools-lessons from within

Yasmina Diab¹, Danielle Proud¹

¹South Australian Department for Education

Background: The need for a meaningful, and engaging food and nutrition curriculum has been well established in the literature. Chronic disease prevention and an obesity lens to food and nutrition education is the norm across primary and secondary school settings. The research suggests that this approach may contribute to unintentional harm in the development of disordered eating behaviours and eating disorders among children and young people.

Aim: To develop a set of overarching values and principles and establish a new contemporary approach to food and nutrition content creation, within the curriculum.

Methods: A literature review was undertaken to define contemporary curriculum practices. In addition, discussions with key Australian academics in this field, were completed and emerging themes summarised. These two pieces of work informed the bases of the overarching lens and principles below.

Results: The overarching lens and principles will be applied by health curriculum writers as part of the development of new curriculum content. Overarching lens included minimising body shaming and links between weight and food, a shift from medicalised model and obesity prevention lens, and a strength based approach. Principles were confidence and empowerment with food, joy and meaning through food, equity and sustainability for food systems.

Conclusions: The learnings from this bold process and work within the education system, extends beyond

traditional nutrition and dietetics and highlights the diverse opportunities available to dietitians. Dietitians and health promotion practitioners working within school settings will benefit from key learnings such as how to navigate the education and curriculum landscape, education versus health language and key influential education players.

Contact Author: yasmina diab, yasmina.diab@sa.gov.au

ID: 176 | A new approach to classifying the healthiness of foods for informing policy actions

Sarah Dickie¹, Julie Woods¹, Priscila Machado¹, Mark Lawrence¹

¹Deakin University

Background: Evidence on the associations between ultra-processed foods and adverse health outcomes is accumulating, yet many policy actions are currently informed by nutrient-based nutrition classification schemes (NCS) which are unable to identify these foods.

Aim: To develop a prototype NCS combining level of processing and nutrient thresholds, examine the resulting classifications of products within the Australian food supply, and compare them to the classifications of existing nutrition classification schemes.

Methods: Two versions of a binary-style prototype were developed combining NOVA and nutrient thresholds (the latter applied to NOVA group 3 only). Australian food products ($n = 7322$, a combined database from Mintel Global new product database and AUSNUT food composition database) were classified as either 'healthy' or 'unhealthy' according to the prototypes, and compared with proportions similarly classified via NOVA, the Pan American Health Organisation's (PAHO) Nutrient Profiling Model, the Australasian Health Star Rating system and the Australian Dietary Guidelines. Cohen's Kappa coefficient was produced to assess pairwise agreement between schemes.

Results: The prototypes classified 74% or 68.5% of the dataset as unhealthy. The prototypes classified a lower proportion of foods as unhealthy compared to the PAHO model (78%), and a higher proportion than NOVA (66%), the Australian Dietary Guidelines and the Health Star Rating system (37% and 54%). Agreement was highest between the prototype and the PAHO model.

Conclusions: A NCS combining level of processing and minimal nutrient thresholds represents a viable evidence-based approach for assessing the health potential of foods for policy purposes.

Contact Author: Sarah Dickie, dickie.sarah@gmail.com

ID: 226 | The association between plant-based diet patterns and cardiometabolic health among Australian adults

Kacie Dickinson¹, Laura Marchese², Katherine Livingstone²

¹Flinders University, ²Deakin University

Background: The benefits of plant-based diet patterns on health outcomes may depend on the quality of the plant-based foods consumed, but this has not been explored in the Australian context.

Aim: To examine the association between plant-based diet patterns and cardiometabolic health among Australian adults.

Methods: Data from the Australian Health Survey National Nutrition and Physical Activity Survey (NNAPS) 2011–2013 and National Health Measures Survey were used. Three plant-based diet quality indices (overall, healthful and unhealthful) were derived from two 24 h diet recalls. Anthropometric measures and blood pressure were taken by trained interviewers. Fasting blood samples were provided to estimate lipid profile and glucose status.

Results: After adjusting for confounders, hPDI was significantly associated with lower odds of overweight and obesity (OR 0.98 95% CI 0.96–1.00) and lower odds of waist circumference indicating high risk for obesity (>94 cm for men; >80 cm for women) (OR 0.98 95% CI 0.96–0.99). uPDI was associated with lower odds of high blood pressure >140/90 mmHg (OR 1.02 95% CI 1.00–1.04). There were no other significant associations between plant-based diet quality indices and HDL, triglyceride status and diabetes status based on fasting plasma glucose or HbA1C.

Conclusions: Further exploration of healthy and unhealthy plant-based diet patterns and the potential mechanisms by which they influence cardiometabolic risk are warranted. This can inform policy and practice recommendations for adopting these types of diets among the population to reduce chronic disease risk.

Contact Author: Kacie Dickinson, kacie.dickinson@flinders.edu.au

ID: 200 | Nutrition care delegation model for paediatrics - A pilot study

Annabel Doolan¹, Aoife Elliott¹, Charlotte Hawthorn¹, Felicity Myers¹, Li Kheng Chai², Kristie Bell³

¹Queensland Children's Hospital, ²Health and Wellbeing Queensland, ³Children's Health Queensland Hospital and Health Service

Background: Healthcare service demands are increasing due to increasing prevalence of chronic diseases, life-expectancy, and consumer expectations. While the value of workforce delegation models for delivering nutrition-care has been established in adult hospitals, feasibility and effectiveness in paediatric settings has not been determined.

Aim: To evaluate the initial implementation of a nutrition-care delegation model in a tertiary-quaternary paediatric hospital and identified barriers and enablers to implementation.

Methods: Twenty-one inpatient dietitians were invited to delegate simple nutrition-care to one trained nutrition assistant (NA). Consent was obtained from parents/guardians. Clinical task instructions for four nutrition care tasks were utilised. Surveys were completed by dietitians before and after implementation to evaluate knowledge and attitudes. Survey results were analysed thematically.

Results: The delegation model was utilised by 14(66%) inpatient dietitians. Nutrition care was delegated for 51 children (72 occasions-of-service), with 49(68%) admitted under oncology/BMT. The top three delegated tasks were home enteral nutrition (HEN) $n = 21(29\%)$, review of oral nutrition support $n = 15(21\%)$ and menu card support $n = 14(19\%)$. Clinical task instructions were adhered to in 96% of all delegations. Surveys were completed by 15(70%) and 18(85%) dietitians before and after implementation. HEN was identified as the preferred care delegation task. Barriers identified to delegation included clinical/psychosocial complexity, perceived delay in care delivery and the need for specialised training.

Conclusions: Results will inform the implementation of the delegation model of nutrition care in a paediatric hospital. Further investigation of paediatric specific NA training is required to increase delegation practices in dietitians.

Contact Author: Annabel Doolan, annabel.doolan@health.qld.gov.au

ID: 157 | Food and eating in the lives of people living with co-occurring substance use and mental health concerns

Jaslyn Dugmore¹, Leonie Cox¹, Danielle Gallegos¹

¹Queensland University of Technology

Background: There is a growing interest in dietary interventions for the treatment and management of mental health and substance use concerns. Despite the high rates of co-occurrence of these as dual diagnosis, there is a lack of

nutrition and dietetic literature in this space. Nutrition research in both the mental health and substance use fields remains predominantly positivist, and nutritional psychiatry is yet to be examined using critical social approaches.

Aim: To provide a critical discourse analysis and review of the literature concerning nutrition, food and eating experiences for people living with dual diagnosis.

Methods: Topics related to dual diagnosis were examined using a critical discourse analysis framework, including literature on recovery narratives, nutrition in substance use, and nutritional psychiatry.

Outcomes: This research suggests that people experiencing madness, mental illness and distress face greater pressures than the general population to eat 'well'. This is consistent with a climate of neoliberalism, where a focus on personal responsibility pervades chronic illness prevention and management narratives, and with discourses of paternalism that have historically dominated mental illness and dietetic literature.

Contact Author: Jaslyn Dugmore, jaslyn.dugmore@gmail.com

ID: 255 | 'My confidence has come up a lot': Empowering rural first nations adolescents in nutrition

Renaë Earle¹, Simone Nalatu², Robyn Littlewood², Jacqueline Walker¹

¹The University of Queensland, ²Health and Wellbeing Queensland

Background: First Nations adolescents are disproportionately impacted by obesity and nutrition-related disease due to colonisation and other determinates of health. Adolescence is an important transitional life period where opportunity exists to solidify health behaviours that will be carried into adulthood. It is widely acknowledged that programs involving First Nations people and adolescents should centre their voices. However, research amplifying these voices is limited, particularly in rural locations.

Aim: To understand perceptions related to nutrition, healthy weight and empowerment among First Nations adolescents, community leaders, Elders and community-controlled health-service staff in a rural Queensland town. The purpose was to co-design an adolescent nutrition and empowerment program.

Methods: The research employed a First Nations qualitative method – yarning. Yarns were semi-structured and co-facilitated by a non-Indigenous researcher and a First Nations health-service staff member. Yarns were undertaken in small groups and explored themes related to rural health,

barriers to good nutrition, adolescent empowerment, confidence, and preferences for an adolescent nutrition and empowerment program and its evaluation.

Results: Thirty people, 76% of whom identified as Aboriginal, were recruited ($n = 10$ adolescents, $n = 10$ health-service staff, $n = 4$ Elders and $n = 6$ community leaders). Thematic analysis revealed barriers to good nutrition, including, an obesogenic environment, expensive healthy food, reluctance towards dietitians and poor cooking and nutrition skills. Empowerment and confidence building activities related to nutrition and cooking were seen as a mechanism to overcome these barriers.

Conclusion: Themes from this qualitative exploration will inform a nutrition and cooking empowerment program with rural First Nations adolescents.

Contact Author: Renaë Earle, renaearle@gmail.com

ID: 221 | Investigating the nutrition dashboard's ability to identify malnutrition in a large rural hospital

Erin Fisher^{1,2}, Kerith Duncanson³, Georgina Luscombe⁴, Leanne Brown²

¹Armida Rural Referral Hospital, ²University of Newcastle, ³Health Education Training Institute, ⁴The University of Sydney

Background: Malnutrition is a highly prevalent, burdensome and costly health issue that is under identified, especially in hospitals. The Nutrition Dashboard is an interactive nutrition technology platform that displays food provision and intake data used to categorise nutrition risk of hospitalised individuals. The Nutrition Dashboard has potential to inform dietetic practice, but research is lacking.

Aim: To investigate the Nutrition Dashboard's ability to identify malnutrition compared to the validated Malnutrition Screening Tool.

Methods: A retrospective observational study at a 99-bed rural hospital was conducted using medical record and food intake data presented via the Nutrition Dashboard. Inter-Rater Reliability of food intake estimation reported good agreement across 912 food items ($\kappa = 0.69$, 95% CI 0.65–0.72, $p < 0.001$). Default nutritional adequacy thresholds of 4500 kJ and 50 g protein were applied for Nutrition Dashboard categorisation. Generalised estimating equation regression models identified the association between the Nutrition Dashboard risk categories and the Malnutrition Screening Tool, with and without controlling for patient demographics.

Results: Analyses from 216 individuals (1783 hospital-stay days) found those in the highest risk Nutrition

Dashboard Category were 1.93 times more likely to have a Malnutrition Screening Tool score indicating risk compared to the lowest Nutrition Dashboard Category (unadjusted odds ratio 1.93, 95% CI, 1.17–3.19, $p < 0.01$). The addition of patient weight to the model decreased the sensitivity of the model for Nutrition Dashboard to predict Malnutrition Screening Tool risk.

Conclusions: There is considerable potential for use of nutrition intake technology in malnutrition identification. Further adaptations that address the complexities of applying this technology could improve the use of the Nutrition Dashboard to support identification of malnutrition.

Contact Author: Erin Fisher, erin.fisher@health.nsw.gov.au

ID: 35 | Determinants of food choice among different athlete groups: A qualitative study

Clare Flower¹, Kathryn Jackson¹, Deb Agnew¹

¹Flinders University

Background: Poor food choices can cause low energy availability, adverse health and performance consequences. Athletes from leanness sports may restrict food intake to achieve a desired physique for performance or aesthetics. Although low energy availability is well documented in female athletes, there is limited research on its manifestation and whether energy restriction is intentional.

Aim: To investigate determinants of food choice among female athletes from leanness and non-leanness sports.

Methods: Ten female leanness ($n = 4$ dancers) and non-leanness athletes ($n = 6$ Australian Rules football players) were recruited from convenience samples. Semi-structured interviews investigated the determinants of food choices. Topics discussed included food preferences, lifestyle, influence from family or friends, nutrition knowledge and sport. Interviews were conducted online to accommodate COVID-19 restrictions. Transcripts were analysed through a thematic approach.

Results: Social constructs, nutritional knowledge, environment, and sport emerged as themes. Social constructs influenced most participants to label food 'good' or 'bad', however dancers were more restrictive of 'bad' foods. Footballers had greater nutrition knowledge than dancers due to education and dietetic exposure. All participants managed commitments alongside sport, requiring organisation to maintain adequate nutrition. Sport had an impact, footballers chose foods to support their sports performance, while the dancers favoured foods to help maintain a lean physique.

Conclusion: Restrictive dietary practices were common among the dancers who felt pressured to maintain a lean physique, while football players focussed on sports performance only. Further investigation is required to determine if this is common among other leanness sports and which aspects of these sports encourage these practices.

Contact Author: Clare Flower, clare.flower@flinders.edu.au

ID: 229 | Athletes' use of and beliefs about ultra-processed sports foods

Adrienne Forsyth¹, Evangeline Mantzioris²

¹Australian Catholic University, ²University of South Australia

Background: Sports foods are convenient sources of nutrients that may be practical alternatives to everyday foods. There is strong scientific evidence to support the use of sports foods in specific situations. However, due to the nature of their formulation, commercial sports foods are inherently ultra-processed foods (UPF). Consumption of UPF is highly prevalent and associated with poor mental and physical health in the general population, but little is known about consumption of and attitudes towards ultra-processed sports foods (UPF-S) in athletes.

Aim: To assess the intake of and attitudes towards UPF-S in athletes.

Methods: In this cross-sectional study, a previously validated survey was adapted and promoted to Australian adult athletes via social media. The anonymous online survey used multi-select and free-text questions about intake of UPF-S including preferences and motivations. Data were analysed using descriptive statistics.

Results: Of 140 Australian adults participating in recreational or professional sport who completed the survey, 95% reported consuming UPF-S within the past 12 months. Relative to UPF-S, everyday food was reported as less convenient to prepare (48%) and to carry during performance (50%) and presented a greater risk of spoilage (55%). However, everyday food was reported to be more affordable (69%), taste better (53%), and present less risk of banned substances (55%). Approximately half (51%) of participants expressed health-related concerns regarding consumption of UPF-S.

Conclusions: Athletes reported regular UPF-S consumption despite taste and cost-related preferences for everyday foods and concerns regarding UPF-S intake. These findings will inform interventions aiming to promote long-term athlete health.

Contact Author: Adrienne Forsyth, adrienne.forsyth@acu.edu.au

ID: 46 | Activist scholarship: Boldly stepping up to reduce inequities in research and practice**Danielle Gallegos**¹, Rebecca McKechnie¹, Joanne Durham¹¹*Queensland University of Technology*

Background: There is growing recognition of the importance of achieving representative participation to amplify the ‘authentic’ voice in public health practice and research, especially where target groups are labelled as ‘disadvantaged’. However, people are often excluded due to perceptions of being ‘hard-to-reach’, increasing the risk of culturally insensitive research, limiting participation and effectiveness.

Aim: To investigate the strategies currently employed to engage ‘hard-to-reach’ groups to achieve ‘authentic’ voice.

Methods: Multiple databases were search systematically and a priori inclusion and exclusion criteria were used to identify relevant papers. Inductive and deductive thematic analysis with free-form mind mapping was used to identify key themes.

Results: Our findings revealed deficiencies in current practices, and that substantial shifts in mindset are required to reframe perceptions of vulnerability and to move towards strengths-based approaches. Such changes will position ‘participants’ as equal and valuable partners or owners of the research process. Researchers and practitioners with learned expertise need to critically evaluate how they can work to address the systemic barriers to participation and partnership to overcome issues of structural precarity.

Conclusion: Practitioners and researchers need to be bold in embracing activist scholarship in which deliberate strategies are engaged to create forums where the ‘authentic’ voice can be heard. There is a delicate balance to be achieved where researcher/practitioner power is used to generate change but at the same time does not subsume the voices of those with the lived experience.

Contact Author: Danielle Gallegos, danielle.gallegos@qut.edu.au

ID: 236 | Novel integration of design thinking during development of a community-based nutrition initiative for underprivileged adolescents**Alanah Giles**¹, Jacqueline Walker¹, Clare Dix¹, Robyn Littlewood²¹*The University of Queensland*, ²*Health and Wellbeing Queensland*

Background: Non-communicable diseases are among the leading causes of death worldwide, with a global action plan emphasising the importance of preventative initiatives addressing dietary and behavioural patterns for sustained change. Adolescence is documented as an advantageous intervention point, as behaviours are malleable and easily acquired. One proposed mechanism for intervention success is improving synergies between research, program development and practice. Limited progress however has resulted in a need for pioneering approaches. Design Thinking – commonly used in engineering, is innovative to public health, and follows an empathetic, user-centred approach to solve complex problems and generate innovative solutions.

Aim: To apply Design Thinking to public health to facilitate the development of a community-based, nutrition-focused program, targeted towards underprivileged adolescents.

Methods: Research methods were guided by five phase models of Design Thinking, and involved an academic institution (The University of Queensland), a government health promotion agency (Health and Wellbeing Queensland), and a community-based organisation (TRACTION). Data were collected across all organisations through questionnaires (adolescent TRACTION participants ($n = 17$), TRACTION staff ($n = 5$)), semi-structured interviews (TRACTION adolescents ($n = 14$)), and focus groups (TRACTION staff ($n = 9$), academics and health professionals at The University of Queensland and Health and Wellbeing Queensland ($n = 3$)). Quantitative data were analysed using SPSS, with qualitative data analysed thematically.

Results: 50% and 85.71% of adolescents expressed wanting to learn about food and nutrition and/or how to cook new foods respectively. One to 2 h was the preferred time spent on workshops (63.64%). ‘Hands-on’ was a common theme emerging across all groups.

Conclusions: These results, coupled with the pilot program, will enhance the iterative process of Design Thinking and highlight the successful integration into public health, while serving as an example of alternative approaches to health promotion.

Contact Author: Alanah Giles, alanah.giles@gmail.com

ID: 58 | Connecting with cultural foods: Exploring food security among people from refugee backgrounds**Tina Gingell**¹, Nehal Eltahir², Evelyn Pe³, Kate Murray¹, Ignacio Correa-Velez¹, Danielle Gallegos¹¹*Queensland University of Technology*, ²*Islamic Women's Association (IWAA)*, ³*Ethnic Communities Council of Queensland (ECCQ)*

Background: People with lived refugee experiences have fled their homes and that experience is forced, generally sudden and stressful, and often coupled with dislocation from family and friends. Food is intimately intertwined with our self-identity and connects us to loved ones. Therefore, food security is essential for people from refugee backgrounds.

Aim: To understand the facilitators and barriers of accessing food for people from refugee backgrounds by exploring the experiences of settlement and other workers.

Methods: Participatory action research methodology was used, and the project was governed by a steering committee of academic researchers and community members. Focus group participants were adult settlement and other workers who regularly interacted with people from refugee backgrounds, could speak English, and preferably self-identified with a refugee background. Participants were recruited through community organisations in Brisbane, Australia, and focus groups were held at the organisation's workplace or online. The focus group guide was co-designed, focus groups were co-facilitated (where possible), and data analysis was conducted collaboratively by the steering committee.

Outcomes: Eight focus groups ($n = 32$) were conducted between June and October 2021. Workers identified people from refugee backgrounds face many challenges imposed by social and political structures when accessing food, and social networks are instrumental to supporting food security. Brisbane is segregated into cultural hubs where services and cultural stores are amassed, which are sought after and improve food security.

Conclusions: Participatory action research methodology leads to new insights when exploring food security of people from refugee backgrounds.

Contact Author: Tina Gingell, t.gingell@hdr.qut.edu.au

ID: 195 | 'It has to be the surgeons' leading sustainability of post-operative diet upgrades

Kate Glen¹, Angela Byrnes¹, David Clark¹, Adrienne Young^{1,2}

¹Royal Brisbane and Women's Hospital, ²The University of Queensland

Introduction: Early recommencement of an oral diet post-colorectal surgery is recommended in practice guidelines; therefore, many dietitians have championed the implementation of standardised post-operative diets (SPOD).

Aim: To understand sustainability of the implementation of SPOD, with this abstract describing the dietitian's role in aiding the process.

Methods: Semi-structured qualitative interviews were conducted via video or telephone to understand clinicians' experiences (dietitians, colorectal surgeons and nurses) of the sustainability of SPOD at Australian and New Zealand hospitals. The Dynamic Sustainability Framework was used to develop the interview guide and undertake deductive thematic analysis.

Results: Overall, 13 clinicians were interviewed from 12 sites (dietitians $n = 8$, surgeons $n = 3$, nurses $n = 2$; median interview time: 31 min). Success of SPOD sustainment varied (not successfully implemented $n = 2$, not sustained $n = 4$, partially sustained $n = 1$, sustained $n = 5$). The dominant theme influencing SPOD sustainability was visible and consistent leadership provided by surgeons, with all aspects of the SPOD protocol sitting under their domain of control. Dietitians were not key leaders but were essential to support the ongoing efforts required to sustain the SPOD; including working with surgeons to conduct audits on diet upgrade compliance and patient outcomes (length of stay and ileus incidence), and educating nurses and junior doctors in the practicalities of sustaining SPOD (e.g., ordering diets).

Conclusion: Whilst sustainability of SPOD ultimately rests with surgeons, dietitians play a key role in influencing, engaging and supporting surgeons to provide visible leadership for SPOD. So, consistent dietetic support is recommended to enable sustainability.

Contact Author: Kate Glen, kate.glen@health.qld.gov.au

ID: 51 | Barriers and facilitators of chronic disease management among South Asian immigrants: A mixed-methods systematic review

Purva Gulyani¹, Priya Rawat¹, Ching Shan Wan², Yusra Elmi¹, Sabrina Gupta³

¹Diet Yumm, ²Australian Catholic University, ³La Trobe University

Background: South Asians had a higher prevalence of having chronic diseases in comparison to Caucasians. Given the increasing South Asian immigration worldwide, there is a growing body of literature exploring chronic disease management in this population. However, no systematic review has collated and synthesised these findings.

Aim: To synthesise qualitative and quantitative studies on chronic disease management among adult South Asian immigrants.

Methods: A mixed-methods systematic review using MEDLINE, CINAHL, ProQuest, Scopus, EMBASE, and Cochrane CENTRAL Library databases was undertaken to synthesise studies related to chronic disease management among SA immigrants. Included studies were critically appraised using the Mixed Methods Appraisal Tool. Quantitative data were transformed then thematically analysed with the qualitative data using NVivo 12. The barriers and facilitators were categorised using the Theoretical Domains Framework.

Result: A total of 18 293 studies were identified, of which 37 articles were included, and most studies provided insufficient information on data collection or analysis. Barriers and facilitators were identified corresponding to the TDF domains of 'environmental context and resources' (e.g., easy access to the healthcare system), 'knowledge' (e.g., managing diabetes by lifestyle factors such as exercise and diet), 'skills' (e.g., unequipped with skills to use blood sugar monitoring device), 'social/professional role & identity' (e.g., belief in devotional foods as harmless), and 'social influence' (e.g., family support in disease management).

Conclusion: This review provides a comprehensive understanding of the complexity involved in chronic disease management among South Asian immigrants, providing insights into developing multifaceted interventions to improve chronic disease management.

Contact Author: Purva Gulyani, purva@dietyumm.com

ID: 99 | Barriers and enablers to diet and exercise in self-managed support program for pre-frailty/frailty

Chad Han¹, Alison Yaxley¹, Claire Baldwin¹, Yogesh Sharma², Michelle Miller

¹Flinders University, ²Flinders Medical Centre

Background: Diet and exercise have been identified as the cornerstones to reverse pre-frailty/frailty.

Aim: To explore barriers and enablers to a self-managed diet-exercise, hospital to home support program that improved frailty in pre-frail/frail older adults.

Methods: A qualitative study on barriers and enablers to a self-managed diet-exercise program that reduced degree of frailty at 3- and 6-months, using semi-structured interviews was conducted. Eleven prefrail/frail older adults aged 68–93 years admitted to the acute medical unit at a tertiary hospital in South Australia were interviewed. Sessions were audio-recorded, transcribed verbatim and analysed thematically.

Results: Four broad themes affecting adherence to diet and exercise in the program were identified: intrinsic

motivation; biophysical issues; psychosocial factors, environmental factors and resources. Enablers to diet and exercise were related more to psychosocial, environmental factors and resources while barriers were more issues of a biophysical nature. Common sub-themes were identified as factors enabling diet included: motivation to self-care/provide care, exercise-induced appetite, social support, education pictorial resource booklet. Other common sub-themes identified as barriers were: side effects from treatment/medications, loneliness, limited transport to buy food. Common sub-themes were identified as factors enabling exercise were: motivation to stay independent, relief from pain after exercise, social support, education pictorial resource booklet. Other common sub-themes identified as barriers were: poor sleep, pre-occupied with multimorbidity, fear of falling, cold weather.

Conclusion: This research revealed important factors affecting the adherence to diet and exercise in pre-frail/frail older adults that should be considered when designing relevant intervention programs.

Contact Author: Chad Han, chad.han@flinders.edu.au

ID: 169 | Quality or quantity: The role of carbohydrate in the health of children with diabetes

Amelia Harray¹, Alison Roberts¹, Naomi Crosby¹, Keely Bebbington¹, Timothy Jones², Paul Fournier³, Grant Smith¹, Elizabeth Davis²

¹Telethon Kids Institute, ²Perth Children's Hospital, ³The University of Western Australia

Background: Families of children with type 1 diabetes (T1D) report using low carbohydrate diets to control blood glucose levels. Yet, there is an evidence gap on what these children are eating, overall nutritional status, and impacts on health. A potential consequence is that carbohydrate is replaced by fat, and the impact of this on cardiovascular risk and other health measures is unknown.

Aim: To investigate the relationship between carbohydrate intake and nutritional status, cardiovascular risk factors, and psychosocial functioning.

Methods: A population-based sample of children (aged ≤10 years) with T1D >1 year are being recruited from Perth Children's Hospital. Data collection includes: 4-day food diaries (assessed using FoodWorks); anthropometrics; blood pressure; DXA body composition; blood lipids, biomarkers of nutritional status; HbA1c, and; questionnaires to assess physical activity and psychosocial functioning.

Results: Preliminary analysis of the first 33 participants (10F;23M; aged 8.7 ± 1.6 years) who have completed the study show: average HbA1c of $7.5\% \pm 0.9\%$ (range:5.0%–9.4%). Average daily energy intake from carbohydrate of $42.6\% \pm 10.3\%$ (range 13%–58%), with an average added sugar intake of 8.2 ± 5.5 teaspoons/day. Four participants consumed $\leq 26\%$ of daily energy from carbohydrate, and all four had total cholesterol levels above the recommended 4.5 mmol/L, with saturated fat intake ranging from 16% to 25% of total daily energy. Of the remaining participants, 11 had elevated total cholesterol, with 5 of these having elevated non-HDL cholesterol.

Conclusions: Further analyses will investigate associations between dietary intake and health outcomes, including amount and sources of carbohydrate against cardiovascular disease biomarkers, to inform future studies, families and clinicians.

Contact Author: Amelia Harray, Amelia.Harray@telethonkids.org.au

ID: 171 | Temporal patterns of ultra-processed compared to discretionary foods from 4-day digital food records in adults

Janelle D Healy¹, Carol Boushey², Amelia Harray³, Charlene Shoneye¹, Christina Pollard¹, Satvinder Dahliwal¹, Deborah Kerr¹

¹Curtin University, ²Epidemiology Program, University of Hawaii Cancer Center, ³Telethon Kids Institute

Background: Identifying the temporal patterns of ultra-processed food (UPF) intake is novel in Australia. Doing so may inform dietary guideline messaging that incorporates research on the adverse health effects of processing methods and additional ingredients in UPFs.

Aim: To identify temporal patterns associated with peak intake of UPFs compared to discretionary food (DF) intake among adults.

Methods: Using a 4-day (4d) mobile food record (mFR™) to collect 4 days (4d) of dietary intake among 162 adults (BMI 25–40 kg/m²), a temporal patterns analysis of DF and UPF intake was conducted using the NOVA classification system. Time of eating was extracted from image metadata. The average percent energy intake (EI) from DF and UPFs were analysed using independent sample t-test, with Spearman's correlation between BMI, sex and age. Percent of summed EI from UPF and DF over 24 h was calculated.

Results: Age and BMI of participants (66% female) were 49 ± 10.9 years and 31.2 ± 3.96 m/kg². The contribution to total EI was 34.7% for UPFs and 28.5% for DFs. Peak EI from UPFs occurred between 6–8 pm

(30.1%) and 12–2 pm (24.8%) with 6.5% between 6 and 10 am. Age, sex and BMI were not found to be associated with UPFs EI.

Conclusions: Over 50% UPFs were consumed over 4 h at traditional lunch and dinner mealtimes. This research highlights the potential value of more salient temporal UPF advice regarding meal choices for adults living with obesity.

Contact Author: Janelle D Healy, Janelle.healy@curtin.edu.au

ID: 69 | Diabetes risk reduction by community-based dietitian-led group education among adults with impaired fasting glucose

Ivan Chak Hang Ho¹, Kwai Sheung Cheung¹, Ka Ian Chan¹, Vivien Man Wai Yu¹

¹Queen Mary Hospital

Background: Emerging evidence recognised the cost-effectiveness of dietitian-led group education in diabetes prevention, achieving reduction of fasting glucose level by 0.1–0.2 mmol/L and glycated haemoglobin (HbA1c) by 0.3%.

Aim: This prospective study investigated the effect of a community-based dietitian-led Pre-diabetes Group Education (Pre-DGE) session on the relative risk of diabetes and glycaemic control among adults with impaired fasting glucose.

Methods: 184 mid-aged impaired fasting glucose adults from 2017 to 2019 were enrolled in the Pre-DGE session held in two community family medicine clinics of Hong Kong. The dietitian-led session facilitated healthy dietary habits including simple sugar restriction, moderate carbohydrate intake, adequate soluble and insoluble fibre intake, healthier cooking and food choices; and active lifestyle, via patient-oriented approach including self-reflection and goal setting. One hundred and eighty impaired fasting glucose adults in the group received routine medical service during the period. The relative risk of diabetes was derived from the incidences of diabetes in the control and Pre-DGE groups within 24 months after the session. Changes in fasting glucose level and HbA1c before and at least 6 months after the session were also compared between the two groups.

Results: The relative risk of diabetes for the Pre-DGE group was 0.5 (95% CI: 0.3–0.8) indicating 50% less likelihood of diabetes diagnosis than the control group (diabetes incidence- Pre-DGE: 10.4% vs. Control: 20.6%, $p = 0.007$). The Pre-DGE participants, compared to the control, yielded significant reduction in both fasting glucose level (0.3(0.7) mmol/L vs. 0(0.8)mmol/L, $p = 0.004$) and HbA1c (−0.1(0.2)% vs. 0.1(0.4)%, $p = 0.038$).

Conclusions: The Pre-DGE session reiterated the effectiveness of dietitian-led group education in diabetes risk

reduction and improved glycaemic management among impaired fasting glucose adults.

Contact Author: Ivan Chak Hang Ho, ivan_ho382@hotmail.com

ID: 106 | A content analysis of mindful and intuitive eating imagery with high engagement on Instagram

Johanna Hoare¹, Natalie Lister¹, Louise Baur², Sarah Garnett², Hiba Jebeile¹

¹The University of Sydney, Children's Hospital Westmead Clinical School; Institute of Endocrinology and Diabetes, The Children's Hospital at Westmead, ²The University of Sydney, The Children's Hospital at Westmead

Background: Young people access social media to search nutrition-related content including diet trends. Mindful/intuitive eating imagery on Instagram has not been explored.

Aim: To determine sample sizes for content analyses and to describe high-engagement imagery related to mindful/intuitive eating, visible to young adult Instagram users.

Methods: Images categorised under hashtags 'mindfuleating' and 'intuitiveeating' were searched in September 2021 using new user accounts (21y) and mobile device 'top posts' view. For each hashtag, screen captures of 750 collage images were used to construct coding frameworks and to determine sample sizes for content analyses. Using these, concurrently captured individual images were collaboratively coded. Image sources and concurrent hashtags were analysed from captions and comments.

Results: Sample sizes for #mindfuleating and #intuitiveeating, respectively, comprised 405 and 495 images. Almost 2/3 of each sample depicted food/drink of which 50%–60% were core foods. Approximately 25% were single person images, of which the majority were young, female adults and 'average-bodied'. Text was generally (69% and 94%, respectively) in English. Approximately 1/3 suggested credibility through credentials/profession/evidence. Messaging was similar for both hashtags, encompassing mindful/intuitive eating (~40%), nutrition/eating behaviours (~15%), physical/mental health (~20%), disordered eating (~12%) and body/self-acceptance (~12%). Differences were observed between hashtags for weight-related concepts (20%/1%) and anti-diet/weight-neutral approaches (10%/35%). Images were shared to 9153/12366 (median) followers and an average ~20 concurrent hashtags.

Conclusions: The representation on Instagram of mindful and intuitive eating portrays healthy lifestyles without a

focus on weight. The lack of demographic and body diversity may reduce their acceptability in broader populations.

Contact Author: Johanna Hoare, jhoa4051@uni.sydney.edu.au

ID: 21 | Bold changes in bread, but continued nutrition guidance is key

Jaimee Hughes¹, Sara Grafenauer², Kathy La Macchia³

¹GLNC, ²UNSW, ³Grains & Legumes Nutrition Council

Background: Bread is a key food in the Australian diet supplying a range of nutrients and is the greatest contributor to whole grain intake.

Aim: To examine bread products in the Australian market and examine change over time, including nutrients, whole grain content, claims and compliance with Healthy Food Partnership targets.

Methods: Data from a nutrition audit of four supermarkets and a bakery franchise (2021) were compared with data collected in 2019.

Results: Core breads ($n = 800$) comprised of 359 loaves, 127 rolls, 178 sandwich alternatives and 136 flat breads. Just 20% of products overall were classified as whole grain with an average of 26.8 g/serve and 27% of loaf breads were at least a source of whole grain (≥ 8 g/serve). With the 86% increase in core sourdough products there was a fourfold increase in those classified as whole grain. Most prevalent claims were plant protein (52%), 'no artificial colours' (41%) and dietary fibre (35%), with 13% of products carrying a whole grain claim. Sustainability claims were seen for the first time (14%) and there was a 38% increase in protein claims between the time points. Whereas 35% of breads and 45% of flat breads met the healthy food partnership sodium targets in 2019, this had increased to 48% of bread and 57% of flatbreads in 2021.

Conclusions: Despite improvements in the formulation of bread, nutrition guidance is needed to help the industry continue this trend and highlight eligible products for whole grain claims.

Contact Author: Jaimee Hughes, j.hughes@glnc.org.au

ID: 22 | Dietitians understanding, attitudes and promotion of grains, whole grains, and ultra-processed foods

Jaimee Hughes¹, Sara Grafenauer², Natasha Krois, Kathy La Macchia³

¹GLNC, ²UNSW, ³Grains & Legumes Nutrition Council

Background: NOVA is a food classification system recommending the consumption of unprocessed/minimally processed foods and the avoidance of a defined group of 'ultra-processed foods' (UPFs). Whole grain containing commercial breads and ready-to-eat breakfast cereals are considered ultra-processed, despite being considered core foods in the Australian Dietary Guidelines. These food categories contribute the greatest quantities of whole grain in the Australian diet, although whole grain consumption in Australia is less than half of the 48 g/day daily target intake. Dietitians are key to disseminating messages about nutrition and health; therefore, an accurate understanding of whole grains and effects of processing is critical to avoid unnecessary exclusion of beneficial foods.

Aim: To investigate dietitian attitudes to the promotion of whole grains and understanding of UPFs, including knowledge and attitudes towards the classification of specific whole grain foods within NOVA.

Methods: An online structured questionnaire was used to explore dietitian's attitudes, understandings, promotion and/or exclusion of whole grains and UPFs ($n = 638$).

Results: Whole grain foods were perceived positively and are regularly promoted in practice. Dietitians (83%) were familiar with advice to limit the intake of highly processed/UPFs and the majority (90%) refer to processing of foods in practice. Dietitians tended not to consider whole grain breads and ready-to-eat breakfast cereals as excessively processed, although most (73%) generally agree with a classification system based on the extent of processing.

Conclusions: If dietitians are to incorporate NOVA and concepts of UPFs in their advice, the anomalies regarding whole grain choices and intake should be addressed.

Contact Author: Jaimee Hughes, j.hughes@glnc.org.au

ID: 145 | Cross-sectional study describing factors of sustainment of physical activity and nutrition interventions in childcare services

Noor Imad¹, Alix Hall², Nicole Nathan, Adam Shoesmith, Nicole Pearson³, Melanie Lum, Serene Yoong¹

¹Swinburne University of Technology, ²University of Newcastle, ³HNE Population Health

Background: Many evidence-based physical activity and nutrition interventions exist within the childcare setting, however, they are not implemented in an ongoing way. There is a need to identify potential factors that may impact the sustainment of these interventions.

Aim: To identify factors related to the sustainment of physical activity and nutrition interventions in childcare services.

Methods: A cross-sectional study was undertaken with a nationally representative sample of 400 childcare services. Factors related to the sustainment of physical activity and nutrition interventions were assessed using a 29-item measure reflecting four domains of the Integrated Sustainability Framework (Outer Contextual Factors, Inner Contextual Factors, Processes and Characteristics of the Intervention) for interventions that supervisors reported as currently implementing. Participants responded using a 5-point Likert scale, with responses ranging from 1 (strongly disagree) to 5 (strongly agree). Domain scores were calculated for each service by averaging item responses.

Results: Preliminary data from 400 services nationally found that the domains; Processes (mean = 3.9), which included factors of partnership/engagement and training/support/supervision and Outer Contextual Factors (mean = 3.9), which included factors of policy and legislation, and socio-political context had the lowest mean scores.

Conclusions: This study suggests that factors related to the Processes and Outer Contextual Factors domains may need to be considered when developing an intervention to increase the sustainability of implementing physical activity and nutrition interventions in childcare settings.

Contact Author: Noor Imad, noorimad7@gmail.com

ID: 124 | Food sovereignty assessment and community-based participatory research – decolonising research and empowering change

Ale Ingabire¹, Malika Abdul¹, Chin Yu Nicole Lam¹, Bindi Bennett¹, Kelly Menzel¹, Kristen Mackenzie-Shalders¹, Louise Van Herwerden¹

¹Bond University

Background: Indigenous food sovereignty, the concept of Indigenous Peoples having the rights and control over their food systems, has emerged in scholarly literature around the world. However, how Indigenous food sovereignty is assessed is ambiguous, with core domains including (1) community ownership, (2) inclusion of cultural knowledge, (3) inclusion of traditional and local foods, and (4) environmental sustainability, not universally described.

Aim: To address this gap in the literature, this review systematically extracted Indigenous food sovereignty assessment approaches utilising these core domains.

Methods: Guided by Indigenous authors, a systematic review of the literature across four databases (Medline, Embase, CINAHL and PsycINFO) was performed.

Studies in any languages from 1996, that described Indigenous food sovereignty interventions were included.

Results: Qualitative assessment of Indigenous food sovereignty was most frequent in included studies. Community-Based Participatory Research approaches were utilised by more than half of the studies to assess Indigenous food sovereignty. This involved Indigenous communities tailoring interventions according to their communication constructs, with one-third of the studies utilising Indigenous methods of inquiry. Studies assessed Indigenous food sovereignty across more than one core domain, with traditional and local foods most frequently assessed.

Conclusions: This review described the importance of decolonising research methods in addressing Indigenous food sovereignty. Research in Indigenous food sovereignty should be aware of the various assessment approaches. The findings from this review suggest that researchers and practitioners assessing Indigenous food sovereignty may need to utilise methods that promote community ownership by working with Indigenous communities and prioritising Indigenous methods, experiences and knowledge.

Contact Author: Ale Ingabire, ale.ingabire.aa@gmail.com

ID: 16 | Teacher, gate keeper or team player: The emerging people of programmatic assessment

Janica Jamieson¹, Simone Gibson², Margaret Hay², Claire Palermo²

¹Edith Cowan University, ²Monash University

Background: A revolution in competency-based assessment is underway with the emergence of programmatic assessment, with dietetics as the vanguard. Programmatic assessment purposefully applies a variety of methods, moments, and people to construct a holistic picture of student performance. From the growing research, the significant, yet poorly understood, role of the *people* has emerged.

Aim: To explore the experiences of practitioners involved in programmatic assessment.

Methods: In this qualitative study, Positioning Theory was applied as a critical lens to elucidate how practitioners perceived themselves and others within programmatic assessment. Focus groups and interviews with practitioners ($n = 44$), across practice areas (prevention and clinical), from two Australian dietetic programs were analysed using framework analysis method.

Results: Practitioners positioned themselves in two of three ways. First, all positioned themselves as *Teacher*,

reflecting the inherent duty to teach and nurture students. This role was enacted in two distinct ways. For some, a hierarchical approach was taken which ascribed a passive and disempowered role onto students. For others, a collaboration was formed that empowered students and developed their leadership. Second, two mutually exclusive positions emerged – *Gatekeeper* or *Team Member*. *Gatekeepers* were vigilant for poor performance, derived from a duty to protect the public. Programmatic assessment challenged their professional identity and diminished power and authority, leading to frustration. In contrast, *Team Members* recognised their contribution as valuable and were liberated from the burden and stress of assessment, enabling a supportive student-practitioner relationship.

Conclusions: Identifying practitioner positions provides opportunities to strengthen programmatic assessment.

Contact Author: Janica Jamieson, j.jamieson@ecu.edu.au

ID: 12 | 25-hydroxy-vitamin D and risk of cardiovascular diseases. Systematic review and meta-analysis of prospective cohort studies

Rati Jani¹, Kshemina Mhaskar¹, Thomas Tsiampalis¹, Miguel Ángel Martínez González¹, Demosthenes Panagiotakos¹

¹Griffith University

Background: Circulating vitamin D is linked with the risk of cardiovascular disease (CVD). A meta-analysis has yet to explicitly explore correlation between vitamin D and the risk of CVD incidence and recurrent CVD.

Aim: To examine the association between 25-hydroxy-vitamin D (25(OH)D) and the risk of CVD incidence (fatal, non-fatal, fatal and non-fatal combined events) and the risk of recurrent CVD (fatal, recurrent, and fatal and recurrent combined events).

Method: A total of 79 studies (46 713 CVD cases in 1 397 831 participants) were included in the meta-analysis, of which 61 studies examined the risk of CVD incidence events, and 18 studies examined risk of recurrent CVD events. PROSPERO registration-CRD42021251483.

Results: The risk of CVD incidence events (RR = 1.34, 95% CI: 1.26–1.43, $p < 0.001$) and recurrent CVD events (RR = 1.86, 95% CI: 1.46–2.36, $p < 0.001$) was higher in the lowest than the highest category of circulating 25(OH)D. Dose-response analysis reported a linear association for every 10 ng/ml increment of 25(OH)D and non-fatal CVD incidence events (RR = 0.94; 95% CI = 0.89–0.98, $p = 0.005$),

lower fatal recurrent CVD events (RR = 0.45; 95% CI = 0.32–0.62, $p < 0.001$) and lower combined recurrent CVD events (RR = 0.80; 95% CI = 0.65–0.97, $p = 0.023$). A non-linear association was observed between higher 25(OH)D and lower fatal CVD incidence events (p -nonlinear < 0.001), lower combined CVD incidence events (p -nonlinear = 0.001), and lower non-fatal recurrent CVD events (p -nonlinear = 0.044).

Conclusions: The lowest category of circulating 25(OH)D was associated with a higher risk of CVD incidence events and recurrent CVD events.

Contact Author: Rati Jani, rati.suj@gmail.com

ID: 222 | Energy- and protein-enriched ready-made meals for older Australians

Ashleigh Jones¹, Tony Ng, Sarah Cinar¹, Fleur Lesslie¹, Larissa Robbins¹, Melissa Holloway¹

¹Lite n' Easy

Background: Many older Australians are regular users of ready-made meals and can access these through home care package funding services. The current market has minimal offerings that support the nutritional needs of community-dwelling older adults, who may be at risk of malnutrition.

Aim: To design a range of smaller, energy- and protein-dense ready-made meals to support older Australians through healthy ageing.

Methods: The team of dietitians at Lite n' Easy developed nutritional parameters for a range of smaller, protein- and energy-dense meals based on general nutrition guidelines for older adults. This range was launched under the sub-brand 'My Choice'.

Results: The standard Lite n' Easy dinners weigh 425 g on average, compared to the My Choice dinners that weigh on average 340 g. The smaller My Choice dinners have been enriched using a food-first approach to provide the same energy (400 calories) and protein (30 g) as the standard dinner range. 93% of surveyed customers ($n = 1734$) reported being able to finish the whole My Choice meal in one sitting compared to the results of a previous survey, where only 56% ($n = 326$) of respondents could finish the larger, standard dinner in one sitting.

Conclusions: The customer response to these smaller meals shows that an energy- and protein-dense meal in a portion acceptable for smaller appetites can achieve a significant protein content and is a commercially feasible option for the food industry. Development of more specific national guidelines that outline nutrient targets for smaller meals may encourage the food industry to develop meals that help to prevent and treat malnutrition in the community.

Contact Author: Ashleigh Jones, emailme@ashleighjones.com

ID: 141 | Helping the skeleton in the closet: Early identification of hospital malnutrition by plate waste

Melissa Jones¹, Mandy Foyster², Julia Price³, Kathryn Collins⁴, Indi Swan³, Bhey Fox³, Vicki Barrington⁵

¹Ballarat Health Service, ²Central Highlands Rural Health, ³Alfred Health, ⁴Dannone, ⁵Latrobe University

Background: Hospital malnutrition has remained consistent between 30% and 50% of inpatients over the past 10 years. Plate waste of $>45\%$ is common among hospital inpatients resulting in suboptimal protein and energy intake. Yet commonly used screening tools including the Malnutrition Universal Screening Tool (MUST) do not consider plate waste as a risk factor for malnutrition.

Aim: To identify key predictors of high plate waste and as a result propose an algorithm (Reduced Intake Risk Assessment [RIRA]) tool to more effectively address in-patients at risk of protein and energy deficit, yet low MUST.

Methods: This retrospective cross-sectional study analysed one-day food intake ($n = 747$) data from acute inpatients admitted to a tertiary hospital over a six-year period. Visual estimation of plate waste was used to estimate consumption. Descriptive data including MUST score, Length of stay (LOS), treating unit and diet order were also collected.

Results: Across all cohorts, mean plate waste was 46.5%. The biggest predictors of high plate waste were long LOS (≥ 14 days, 51.7 ± 27.7), admission to the gastro/surgical unit (54.8 ± 28.6) or fluid only (63.9 ± 30.4) and texture modified (57.6 ± 31.4) diet orders. One third (33.6%) of patients with a low malnutrition risk ($n = 345$) had high plate waste.

Conclusions: Predictors of high plate waste were incorporated to develop the novel RIRA algorithm to be used in conjunction with the MUST to enhance early identification of patients at risk of malnutrition. Early detection of underfed patients provides a proactive dietetic approach and may reduce the incidence of malnutrition.

Contact Author: Melissa Jones, jones99melissa@gmail.com

ID: 225 | Exploring the cost and environmental benefits of a decanted hospital food service model

Gabrielle Kachoyan, Karen Walton¹, Andrew Slattery²

¹University of Wollongong, ²Canberra Health Services

Background: A key health concern for adults over 65 years is malnutrition. A contributing factor to malnutrition development in hospitals is an inability to open food and beverage packaging. At least 40% of patients have reported difficulties opening small plastic packets.

Aim: To compare the impact of decanted and pre-packaged food and beverage items on the resultant waste, cost saving and stakeholder views and perceptions within a hospital food service.

Methods: This study was conducted in June 2021 by two student dietitians at The Canberra Hospital in Australia. The study focused on the cereal and milk component of breakfast and the cheese and biscuits mid meal. The waste and cost differences from both methods was investigated. Staff and patient views and perceptions of the decanted model was also examined through interviews and surveys respectively.

Results: The decanted model would save The Canberra Hospital a total of 2513 kg of plastic, 345 kg of paper and \$49 568 per year. Of the nine patients surveyed, 44% preferred the decanted model, 33% preferred the current packaged model and 22% had no preference. Fifty-five percent of patients reported difficulties opening food packages both in and out of hospital. Key topics from staff interviews included the immense amount of waste in the hospital, the problematic nature of packaged items and infection control protocols hampering efforts to change current practices.

Conclusions: The study found significant waste and cost savings from implementing a decanted food service model. Patients and staff interviewed responded positively to the proposed model.

Contact Author: gabrielle kachoyan, gkachoyan@gmail.com

ID: 134 | Does diarrhoea diagnosis cause an interruption in enteral nutrition delivery in the ICU – Retrospective audit

Weijue Kang¹, Claire Woodward², Lina Breik², Lisa Barker¹

¹Monash University, ²Eastern Health

Background: Infective diseases, pharmaceutical causes, and enteral nutrition (EN) delivery are commonly blamed for diarrhoea in critically ill patients. Reduction or cessation of EN is common after diarrhoea diagnosis, however there is insufficient data to show the extent of this issue in Australian Intensive Care Units (ICUs).

Aim: To investigate the impact of diarrhoea diagnosis on enteral feed delivery in ICU. Secondary outcomes

included documented EN rate changes, and associated medication changes after diarrhoea diagnosis.

Method: This single-centre retrospective audit collected data on medical ICU patients who were coded by the Hospital's Health Information Systems Department for 'diarrhoea' and 'mechanical ventilation >72 h'. Data related to nutrition intervention and requirements, medication provision, and time of diarrhoea diagnosis were collected from the electronic medical record.

Results: Twenty-seven patients were included in the final analysis (mean age 60 years, 59% male). EN delivery before diarrhoea diagnosis met 76% of energy and 80% of protein requirements, however after diagnosis, provision of energy dropped to 61% ($p = 0.128$) of requirements and protein to 60% ($p = 0.055$). Documentation of change in EN delivery was observed in 33% ($n = 6$) of cases, with dietitian involvement evident for one patient.

Conclusions: Diarrhoea diagnosis caused a reduction in energy and protein delivery with inconsistent management and documentation observed. Further investigation is required, including consideration of a bowel management protocol, to improve EN delivery in the presence of diarrhoea. Background infective diseases, pharmaceutical causes, and enteral nutrition (EN) delivery are commonly blamed for diarrhoea.

Contact Author: Weijue Kang, wkan0003@student.monash.edu

ID: 131 | Menu Box Delivery food service model to improve menu compliance in Australian long day care

Shabnam Kashef¹, Dorota Zarnowiecki¹, Victoria Brown², Amber Kelaart³, David Cox⁴, Rebecca Golley¹

¹Flinders University, ²Deakin University, ³Nutrition Australia, ⁴Commonwealth Scientific and Industrial Research Organisation (CSIRO)

Background: The childcare setting has been identified as an opportune setting to improve children's diet quality, however, such services often fail to meet menu guideline recommendations. Some barriers identified by childcare cooks include insufficient menu planning tools and resources, lack of time, nutrition knowledge and/or confidence.

Aim: To evaluate the feasibility, acceptability and effectiveness of a novel foodservice model to support adherence to menu planning guidelines in the childcare setting.

Methods: An eight-week cluster randomised controlled trial was undertaken with eight South Australian long day-care centres. The intervention group trialled a Menu Box Delivery service that provided all the recipes and ingredients to serve three meals per day, underpinned by a 4-week menu that met nutrition guidelines. The standard practice comparison group received access to an online cooks training and menu assessment tool. Outcome measures included menu compliance and cook and director feedback.

Results: At follow-up, all intervention centres were compliant with vegetable, meat, grain, and fruit food group guidelines, whereas the comparison group centres were compliant in the fruit and cereal food groups only. When asked if they would continue to use the service if able to, all intervention centre directors agreed that they would, in comparison to half of cooks agreeing. However, all cooks and directors reported that they were satisfied with the Menu Box Delivery service.

Conclusions: These findings showed an improvement in centre menu compliance with guidelines and provide insight into the application of, and opportunities to improve a contemporary food service model.

Contact Author: Shabnam Kashef, shabnam.kashef@flinders.edu.au

ID: 186 | Effectiveness of intuitive eating interventions on improving diet quality of adults: A systematic literature review

Ashleigh Keefe¹, Katie Hackett, Josephine Bosker¹, Jennifer Utter¹, Anna D'Arcy², Molly Warner, Dianne Reidlinger¹

¹Bond University, ²My Nutrition Clinic

Background: Intuitive eating interventions aim to improve individual health and promote sustainable changes to one's relationship with food. There is not yet an evidence-based consensus on the impact of intuitive eating interventions on diet quality.

Aim: To investigate intuitive eating interventions and the impact on diet quality. A secondary aim was to explore the impact of intuitive eating interventions on anthropometric measures, physiological markers and eating behaviours.

Method: Five electronic databases were systematically searched in October 2021 for studies (with or without a comparator group) reporting interventions focused on intuitive eating, and reporting diet quality, anthropometric, physiological and eating behaviour outcomes. Screening of search results was completed independently by two researchers. Quality of included studies was assessed

using the Mixed Methods Appraisal Tool and findings were synthesised narratively.

Results: Seventeen papers reporting on 14 intervention studies ($n = 3960$) were included in the review. All papers found either a positive or neutral effect on diet quality following an intuitive eating intervention. Of those that included indicators of eating behaviour as an outcome measure (11 studies), a favourable change was observed. Anthropometric measures were either reduced or maintained, however, no conclusions could be drawn regarding physiological markers due to limited available evidence. There was large variation throughout the studies in the tools used to report outcome measures.

Conclusions: Intuitive eating interventions may be effective for maintaining or improving diet quality and eating behaviour. Further research would benefit from standardised outcome measures of diet quality and eating behaviour.

Contact Author: Ashleigh Keefe, ashleigh.keefe@student.bond.edu.au

ID: 19 | Development of a meal service to meet the needs of those completing COVID hotel quarantine

Suzanne Kennewell¹

¹Sydney Local Health District

Background: From March 2020 return travellers to Australia were required to undertake a period of hotel quarantine. In NSW return travellers with COVID symptoms, or complex health needs, were supported in serviced apartments managed by NSW Health. Using serviced apartments provided access to larger rooms and balconies, facilitating access to fresh air, which was identified by many return travellers as critical to their health. The lack of commercial kitchens on site, and the availability of fridges and microwaves in guest suites informed the development of the meal service model.

Aim: To establish a meal service model to meet the needs of those completing COVID hotel quarantine within the physical and staffing resources available in an emergency response.

Method: Space on the ground floor of each serviced apartment was co-opted to provide a functional area from which to coordinate the delivery of commercial ready-to-eat food. Suppliers and support staff were identified who could be redeployed to support the quarantine hotels.

Results: The final food service model saw daily delivery of fresh sandwiches/wraps/poke bowls, shelf-stable snack

packs and breakfast packs, and frozen meals and desserts delivered to each site to be packed and distributed immediately to individual apartments. Only leftover product needed to be stored in the limited refrigeration and freezer space. Additional groceries supported a range of different special diets, cultural practices and personal preferences.

Conclusions: This case study provides novel information on the evolution of an emergency response meal service model and shares lessons for future emergency responses.

Contact Author: Suzanne Kennewell, Suzanne.Kennewell@health.nsw.gov.au

ID: 13 | The relevance of whole-grain food definitions in improving whole-grain intake

Katrina Kissonock¹, Elizabeth Neale¹, Eleanor Beck¹

¹University of Wollongong

Background: Whole grains are known for their numerous health benefits, however intake is low globally. Various strategies exist to promote and encourage whole-grain intake, yet we must consider the translation to consumers. Standardised whole-grain food definitions may promote consistency in messaging, while reducing consumer confusion and scepticism.

Aim: To investigate the impact and relevance of whole-grain food definitions in the public health, food industry and consumer contexts.

Methods: Concepts of the Whole Grain Initiative definition for a whole-grain food were applied to and explored within nutrient profiling and front-of-pack labelling. Here, whole grain was included into the Nutri-Score nutrient profiling algorithm using similar scoring to other health promoting nutrients. Hypothetical adoption of the definition within front-of-pack labelling was qualitatively explored among food industry personnel ($n = 17$) and consumers ($n = 43$) through interviews and focus groups respectively.

Results: Inclusion of whole grain in the Nutri-Score algorithm better promoted foods with substantial whole grain and better aligned with dietary guidelines. Whole-grain food definitions were not well understood by consumers due to a lack of understanding, confusion and scepticism, however utilisation within the food industry would reduce misleading information and provide clearer guidance and labelling for consumers.

Conclusions: Adequate translation of messaging on foods, by way of standardised whole-grain food

definitions applied in practice, would provide consistency, reduce consumer confusion and scepticism, and assist consumers to identify and better understand the benefits of whole-grain foods. This consistency may finally achieve improved whole-grain intakes.

Contact Author: Katrina Kissonock, krk981@uowmail.edu.au

ID: 87 | Visual concept diagrams: An emerging approach to teaching the Nutrition Care Process and Model

Bojana Kovacic¹, Philippa Lyons-Wal¹, Therese O'Sullivan¹, Janica Jamieson¹

¹Edith Cowan University

Background: The Nutrition Care Process (NCP) underpins Australian dietetic practice. Although graduates must be competent and confident applying the NCP to solve complex real-world problems there is limited evidence for effective educational approaches. Conceptual diagrams, a form of visual concept mapping, enable the analysis of a topic using an existing framework, such as the NCP. This approach has been associated with positive learning outcomes in other disciplines.

Aim: To evaluate whether a conceptual diagram assessment could significantly improve student knowledge of the NCP and increase student confidence to apply the NCP to dietetic practice.

Methods: Students ($n = 19$) enrolled in a Masters level dietetic course presented a real client case study using a conceptual diagram assessment, structured using the NCP. Client cases were sourced from participation in the university's dietetic student clinic. Students completed a modified version of the *Attitudes Skill Knowledge NCP* survey including 10 multiple choice questions (maximum score/10) pre and post the assessment task to determine knowledge of the NCP; and three questions using 5-point Likert scales to assess self-reported confidence in applying the NCP.

Results: Following the assessment task, mean \pm SD student NCP knowledge (pre 5.63 ± 1.67 , post 8.36 ± 1.16 , $p = 0.0001$) (Wilcoxon Signed-Rank test) and confidence (pre 21% and post 79%) increased. All participants recommended it as a useful assessment for the future, noting that the use of a real client case was the most useful aspect.

Conclusion: Conceptual diagrams, using a real client case study, provide a novel and effective educational

technique for dietetic students learning about NCP application.

Contact Author: Bojana Kovacic, bojanak@our.ecu.edu.au

ID: 232 | Pandemic protocol: A novel model of nutrition care for the efficient management of COVID-19 inpatients

Jacqueline Kydd¹, Erin Ortado¹, Margaret Holyday²

¹Prince of Wales Hospital, ²South Eastern Sydney Local Health District

Background: The 2021 Delta outbreak in Sydney saw an exponential increase in the hospitalisation of unvaccinated or partially vaccinated COVID-19 positive patients causing unprecedented changes to hospital practice. Despite the documented high nutrition impact symptom burden associated with COVID-19 infection, dietitians capacity to provide nutrition care for this population was limited by staffing constraints, access to patients and high patient volumes.

Aim: To develop and implement a protocolised model of care to deliver efficient quality nutrition care to a large volume of COVID-19 inpatients at Prince of Wales Hospital.

Methods: An investigation of evidence-based practice guidelines and pre-existing models regarding nutrition care of COVID-19 acute inpatients was conducted by a team of dietitians. A novel protocol and supporting toolkit was developed, patients were screened by dietitians and received protocolised or individualised nutrition intervention based on nutrition risk identified. Patients previously referred to Dietetics were excluded.

Results: The protocol allowed dietitians to identify priority patients for nutrition intervention across 3 dedicated COVID-19 wards. Over a 43 day period during the Delta outbreak 172 inpatients were screened, of which 119 patients received protocolised care, 21 (12%) patients required full dietitian assessment and 17 received no intervention due to discharge.

Conclusion: This novel model of nutrition care facilitated the efficient management of a large volume of high risk patients throughout unprecedented workforce demands. Such a model holds the potential to provide protocolised care across multiple hospital sites and can be adapted as the pandemic and the healthcare response evolves.

Contact Author: Jacqueline Kydd, jacqueline.kydd@health.nsw.gov.au

ID: 113 | Nutritional intakes and clinical outcomes in post-Intensive Care Unit patients: A retrospective audit

Sophia Ching Wun Lam¹, Alice Goodman², Fiona Turnbull², Lisa Barker¹

¹Monash University, ²Peninsula Health

Background: Nutrition is important in recovery, especially for patients after prolonged Intensive Care Unit (ICU) stays. Despite emerging evidence of ICU survivors experiencing nutritional deficits, weight loss, and malnutrition, limited published data examine the association of nutritional intake in the post ICU period on health outcomes.

Aim: To explore nutritional adequacy within and post ICU discharge on health outcomes, such as weight change, nutritional status, falls incidence, infection, and the development of pressure ulcers.

Methods: This retrospective audit recruited 14 patients admitted to ICU and intubated consecutively for 5 days or longer. The primary outcome measure was energy and protein intake in ICU and then until health service discharge. This was analysed against secondary outcomes, including weight change, nutritional status, falls incidence, infection, and pressure ulcer development.

Results: Mean overall intake on the ward was lower than ICU, with average intake of energy falling by $9.1\% \pm 26.5\%$ and protein falling by $4\% \pm 24.2\%$ upon ICU discharge. Twenty-nine percent of patients became malnourished during their inpatient admission. These malnourished patients were more likely to fall or develop a pressure ulcer compared to their well-nourished counterparts, however this did not appear to be linked to dietary intake. An average of 12.4 kg weight was lost per person during their hospital stay.

Conclusion: Patients' nutritional intake declined after ICU discharge and they experienced weight loss and malnutrition. Future studies with longer patient follow-up into the community are needed to measure the effect on post-hospital admission morbidity.

Contact Author: Sophia Ching Wun Lam, sophialam@hotmail.com

ID: 15 | Are telehealth-delivered diet and exercise interventions cost-effective? A systematic review

Lynette Law^{1,2}, Jaimon Kelly³, Holly Savill, Matthew Wallen⁴, Ingrid Hickman^{3,5}, Daniel Erku⁶, Hannah Mayr^{1,3,5,7}

¹Bond University; ²La Trobe University; ³The University of Queensland; ⁴Flinders University; ⁵Princess Alexandra Hospital; ⁶Griffith University; ⁶Princess Alexandra Hospital; ⁷Metro South Health

Background: Telehealth-delivered nutrition and exercise care have catapulted into usual care systems to assist the management and treatment of patients with varied health conditions. Despite strong evidence for their effectiveness, there is limited evidence regarding cost-effectiveness.

Aim: To evaluate the current literature reporting on the cost-effectiveness of telehealth-delivered diet and/or exercise interventions.

Methods: PRISMA and Criteria for Cost-Effectiveness Review Outcomes guidelines were followed. PubMed, CENTRAL, CINAHL and Embase were searched for published literature from database inception to November 2020. Data extraction and reporting quality assessment followed the Consolidated Health Economic Evaluation Reporting Standards (CHEERS) checklist. Extracted data were subcategorised by telehealth modality.

Results: Twenty-four controlled trials (11 combined diet and exercise, 9 exercise-only and 4 diet-only interventions) were included. Studies were conducted in adults and the most common primary conditions were overweight/obesity (33%), chronic cardiac conditions (29%) and type 2 diabetes (8%). Interventions were predominantly 2 years or less in duration. Twelve studies (50%) reported the intervention to be cost-effective, utilising either telephone ($n = 4$), internet ($n = 3$), a combination of internet and telephone ($n = 3$), or mHealth ($n = 2$). Seven (29%) studies reported interventions which were not cost-effective, and five (21%) reported inconclusive results. Quality of reporting varied with between 54% to 92% of CHEERS items reported. There was high variability in the effectiveness outcomes and types of costs and payer perspectives.

Conclusions: Telehealth-delivered diet and/or exercise interventions can be cost-effective compared to traditional care. Further investigations that employ rigorous methodology, economic reporting, appropriate decision analytical models and longer timeframes are needed.

Contact Author: Lynette Law, l.law@latrobe.edu.au

ID: 170 | The accuracy of nutrition and dietetic students in estimating food weights from images

Lani Le, Lisa Goldsworthy, Deborah Kerr¹, Boushey J. Carol, Fengqing Zhu²

¹Curtin University, ²Purdue University

Background: Accurate estimation of food weights from images is an important skill for dietetic professionals. Image-based dietary assessment can inform nutritional interventions, practice, and research. Limited research has indicated amorphous, and energy dense foods are the most difficult to estimate.

Aim: To assess the accuracy of nutrition and dietetic students in estimating food weight of amorphous-shaped and energy dense foods from images captured with a mobile food record appTM.

Methods: Nutrition and dietetic students ($n = 43$) with no prior experience in estimating food weights, quantified weight in grams of 11 food items (seven amorphous-shaped and three energy dense) within the context of a meal via an online questionnaire. Accuracy in weight estimations were determined through comparison to true weights. Participants' reported their confidence in quantifying food weights.

Results: Overall, 13% of estimations were considered accurate (within $\pm 10\%$ of true weight). Amorphous-shaped foods were underestimated (mean -31% error), whilst energy dense were overestimated (mean 4% error). Brownies had the lowest median error (2% error), whilst soup had the greatest median error (-61% error). All items had high variations in weight estimations, particularly cereal (true value = 45 g, IQR = 88 g) and brownie (true value = 49 g, IQR = 112 g). Students reported low confidence (40%) in their ability to assess weights of food images.

Conclusion: As with previous research, amorphous-shaped and energy dense foods were difficult to assess accurately. These results highlight the need to develop training programs for food weight estimations from images to ensure accuracy and confidence in human assessment of images.

Contact Author: Lani Le, lani.le@postgrad.curtin.edu.au

ID: 78 | Strengthening the structured oral clinical exam component of dietetics skills recognition assessment

Joanne Leeson¹

¹Dietitians Australia

Background: Valid and reliable assessment informs decisions about competent practitioners within health-care professions. The Dietetics Skills Recognition process for dietitians educated overseas or returning to practice, includes multiple pieces of assessment to inform competency decisions, including an oral examination, which has historically proven difficult to standardise and validate.

Aim: To explore the feasibility and validity of a new online structured oral clinical exam.

Methods: The exam was developed to be administered online (videoconference) with three tasks –assessment, intervention and interprofessional practice, 20 min each,

with stations equally weighted in terms of assessment and four scenario question sets. Examiners and actors were trained in the exam format and assessment. Pilot exam feedback from 12 volunteer candidates of final year students/recent graduates, 14 examiners (two per station) and three independent observers informed a change to the timing allocation for each task revised to be 20 (intervention), 30 (assessment) and 10 (interprofessional practice) minute duration and the use of one examiner per station.

Results: The first use of the process included 11 candidates from seven countries. A compensatory standard setting approach based on total score together with the use of Angoff standard setting to complement borderline candidates (due to low numbers) was employed. The pilot demonstrated feasibility and the standard setting process provided initial validation.

Conclusions: Further work will explore the continued performance of the exam to gather larger data to inform validity.

Contact Author: Joanne Leeson, accreditationadmin@dietitiansaustralia.org.au

ID: 82 | Comparing the efficacy of dietitians overseeing Home Enteral Nutrition Programs at Public Hospitals in NSW

Rania Liaros¹, Anne-Therese McMahon², Maya Young³

¹South Eastern Sydney Local Health District, ²University of Wollongong, ³Hunter New England Local Health District

Introduction: The recognition of Home Enteral Nutrition (HEN) has increased over the last few decades. The Agency of Clinical Innovation (ACI) have established best practice guidelines for the implementation of HEN programs in hospitals across New South Wales (NSW).

Aim: To (i) identify current HEN practices at hospitals across NSW and (ii) explore dietitian perceptions of the HEN program at a tertiary teaching hospital in NSW.

Methods: Hospitals across NSW were contacted to obtain information on: clinic maintenance, eligibility criteria and service delivery of the HEN program. Results were compared to ACI HEN Guidelines. Focus groups were conducted with dietitians, exploring their perceptions of the HEN program, including barriers and enablers of referring into the clinic. Results were qualitatively described.

Results: Seventeen hospitals were included in the evaluation of HEN programs. Eight hospitals had a dedicated HEN dietitian, three had a dedicated HEN clinic and eight did not have a system in place to meet the ACI Guidelines. Twenty dietitians participated in focus groups. Themes

emerged supporting a multidisciplinary approach, and telehealth presented as an opportunity to enhance service delivery. Barriers included a lack of accommodation for urgent referrals and limited dietetic services offered across other local health districts impacting upon local HEN programs.

Discussion: Differences exist across HEN services, which has the potential to impact on local service delivery. A consistent approach to meeting the ACI Guidelines will contribute to better management of nutritional support locally and may improve patient outcomes and reduce nutrition-related hospital presentations.

Contact Author: Rania Liaros, rania.liaros@health.nsw.gov.au

ID: 107 | Development and feasibility of an inpatient cancer-related sarcopenia pathway at a major cancer centre

Jenelle Loeliger¹, Lara Edbrooke¹, Robin M Daly², Jane Stewart¹, Lucy Bucci¹, Carmen Puskas, Marnie Fitzgerald¹, Brenton Baguley², Nicole Kiss²

¹Peter MacCallum Cancer Centre, ²Deakin University

Background: Cancer-related sarcopenia is a complex condition, however no cancer-specific clinical model is available to guide clinical practice for cancer inpatients.

Aim: To develop an evidence-based care pathway for the management of cancer-related sarcopenia ('sarc-pathway'), and pilot test the feasibility (reach, intervention fidelity, patient and clinician acceptability) of the sarc-pathway in an inpatient cancer ward.

Methods: The sarc-pathway was developed using a care pathway format and informed by current literature. Patients admitted to a 32-bed inpatient cancer ward were recruited to receive care as described on the sarc-pathway and feasibility outcomes assessed.

Results: Of 317 participants admitted to the ward, 159 were recruited during the 3.5 month pilot (median age 61 years; 56.0% males). Participant consent to care on the sarc-pathway was high (99.4% of those approached) and 30.2% were considered at risk of (probable) sarcopenia/ sarcopenia. The sarc-pathway components of screening, assessment and treatment were delivered as intended, however low completion of clinical assessment measures were seen for muscle mass (bioimpedance spectroscopy, 20.5%) and muscle function (5-times chair stand, 50.0%). Patient and multidisciplinary clinician acceptability of the sarc-pathway was high and moderate, respectively.

Conclusions: In an inpatient cancer ward, the sarc-pathway is a feasible and acceptable clinical model to deliver and adhere to the sarcopenia clinical parameters

specified, albeit with further exploration of appropriate clinical assessment measures. Future work will focus on testing the effectiveness of the intervention in clinical practice in order to improve outcomes for cancer patients with or at risk of sarcopenia.

Contact Author: Jenelle Loeliger, Jenelle.Loeliger@petermac.org

ID: 110 | Improving nutrition care and information for cancer patients: A mixed-methods study to explore patient, carer and health professional access, perceptions and practices

Jenelle Loeliger¹, Rebecca McIntosh¹, Vanessa Hughes¹, Jane Stewart¹, Alexis Butler¹, Samantha Chandler², Keith Donahue², Andrea Elliott³, Tanith Lamaro⁴, Kate Kaegi⁵, Helena Kelly¹, Nicole Kiss⁶, Katherine Lane⁷, Kathy Quade⁸, Liz Simkiss⁹, Natalie Simmance¹⁰, Wendy Swan, Tania Wohling⁹, Jill Francis¹¹

¹Peter MacCallum Cancer Centre, ²Consumer representative, ³Eastern Health, Monash University, ⁴Access Health & Community, ⁵Austin Health, ⁶Deakin University, ⁷Cancer Council Victoria, ⁸Western and Central Melbourne Integrated Cancer Services, ⁹Victorian Government, ¹⁰St Vincent's Hospital Melbourne, ¹¹University of Melbourne

Background: Gaps in nutrition information and care provision to cancer patients may lead to poor outcomes.

Aim: To investigate patient/carers access and perceptions, health professional views and practices, relating to cancer nutrition information and care.

Methods: Cancer patients/carers recruited through Victorian health services and cancer consumer networks completed a study-specific online consumer survey. Teams of 4–7 multidisciplinary cancer health professionals from seven health services (hospital and primary care settings) were formed and invited to participate in (1) study-specific online health professional survey, (2) key informant interview. Interviews were recorded, transcribed and thematically analysed.

Results: Of 104 consumer survey respondents ($n = 97$ patients, $n = 7$ carers), 61% agreed that it 'took too much time to find evidence-based nutrition and cancer information'. Only 46% saw a dietitian. Common barriers to accessing nutrition care were 'I did not know I could', 'was not offered', 'do not understand the different services available'. Health professional survey responses ($n = 34$) indicated nutrition care and referral communication from hospital to primary care was poor and confidence was low in identifying post-treatment

nutrition services for patients. Interviews ($n = 30$ health professionals) identified that the greatest barriers to delivering nutrition care were lack of referral services, knowledge/skill gap to identify nutrition issues or provide care, and time to identify nutrition issues and make referrals.

Conclusions: There is potential for improved patient/carers access and support for cancer nutrition information and care. Study findings will inform the design of interactive cancer nutrition resources and strategies for implementation across health settings.

Contact Author: Jenelle Loeliger, Jenelle.Loeliger@petermac.org

ID: 156 | Haem iron intake is associated with MACE: The Concord Health and Ageing in Men Project

Rebecca Luong¹, Rosilene Ribeiro, Anna Rangan¹, Vasi Naganathan¹, Fiona Blyth¹, Louise M Waite¹, David J Handelsman², Robert G Cumming¹, David G Le Couteur^{1,2}, Vasant Hirani¹

¹The University of Sydney, ²ANZAC Research Institute

Background: Nutritional intake could influence the development of major adverse cardiovascular events (MACE).

Aim: To evaluate the associations between dietary iron intakes and MACE.

Methods: Prospective analyses on iron intakes and MACE using cox regression, involved 539 men aged 75 years and over at nutrition assessment from the Concord Health and Ageing in Men Project cohort study. Dietary calculation was used to derive haem iron (HI) and non-haem iron (NHI) intakes from total iron intakes assessed through a validated diet history questionnaire.

Results: The incidence (median (IQR) follow-up of 5.3 (4.6–6.3) years) were: 31.2% ($n = 168$) MACE, 20.1% ($n = 111$) all-cause mortality, 3.1% ($n = 15$) coronary revascularisation and 11.3% ($n = 61$) congestive cardiac failure (CCF). In adjusted analyses, higher HI intake (each 1 mg increment) was associated with increased MACE (HR: 1.49 [95% CI: 1.19, 1.87, $p = <0.001$]), all-cause mortality (HR: 1.50 [95% CI: 1.13, 2.00, $p = 0.006$]), coronary revascularisation (HR: 2.10 [95% CI: 1.08, 4.07, $p = 0.028$]) and CCF (HR: 2.31 [95% CI: 1.58, 3.38, $p = <0.001$]). Higher HI:NHI ratio, medium or high tertiles of HI and HI:NHI ratio intakes had similar associations with MACE, all-cause mortality and CCF.

Conclusions: Higher HI and HI:NHI ratio intakes were associated with increased risks of MACE and individual endpoints of MACE over 5 years.

Contact Author: Rebecca Luong, rebecca.luong@sydney.edu.au

ID: 101 | We're on a highway to timelier patient diagnosis and nutrition education access via ACDC: A Coeliac Disease Dietitian-led Clinic

Paula MacDermott¹, Michelle Palmer², Liz Purcell³

¹Tract Your Way, ²Queensland Health, ³Logan Hospital

Background: Lengthy delays to diagnosis and treatment for adult patients with newly diagnosed coeliac disease (CD) were observed at Logan hospital. As such, ACDC was implemented in 2019 reflecting the NICE and British Gastroenterologist Association guidelines. Under ACDC, the Dietitian removes potential CD patients from the Gastroenterology waitlist, and orders appropriate pathology DEXA and endoscopy. Those confirmed CD are given Dietetic education 4 weeks, with follow up at 3, 6 and 12 months.

Aim: To compare time to patient CD diagnosis and nutrition education between the previous (pre-ACDC) and the ACDC expanded scope (post-ACDC) models of care.

Methods: This was a 24-month pre-test post-test study where demographic, medical and appointment data were sourced from medical records. Chi-squared and t-tests were used to assess differences between pre- and post-ACDC groups.

Results: Sixty-one patients ($n = 31$ post-ACDC) were eligible (66%F, aged 43 ± 16 years, 84% [$n = 41/49$] had anti-TTG > 20). Time from specialist referral to CD diagnosis (endoscopy date) improved from 140 (10–749) days pre-ACDC to 90 (11–213) days post-ACDC ($p = 0.002$). Time from specialist referral to first CD-related nutrition education improved from 247 (29–1364) days pre-ACDC to 112 (34–245) days post-ACDC ($p < 0.001$). These are conservative improvements given COVID-19 delayed services, post-ACDC only, for most ($n = 27/31$) post-ACDC patients. While most (93%) pre-ACDC patients had gastroenterologist appointments over 12 months (3[0–6] appointments), preliminary review suggests fewer patients required fewer gastroenterologist appointments post-ACDC.

Conclusions: An ACDC expanded scope model of care may provide more timely diagnosis and nutrition education for adult patients with newly diagnosed CD. Longer-term follow-up will also determine if ACDC resulted in fewer gastroenterologist appointments.

Contact Author: Paula MacDermott, paulamacdermott@tractyourway.com.au

ID: 151 | Measuring adherence to sustainable healthy diets: A scoping review of diet quality metrics

Priscila Machado¹, Mark Lawrence¹

¹Deakin University

Background: Addressing unhealthy and unsustainable diets is a key priority on the agendas of governments, academia, and civil society worldwide. Despite the significance of the topic, it is unclear how dietary metrics used to monitor the quality of diets account for all components of sustainable healthy diets.

Aim: To explore how principles of sustainable healthy diets are considered in global diet quality metrics used worldwide.

Methods: A scoping electronic search comprised a hand-search of metrics included in relevant reviews of the field; and due to the novelty of the topic, additional sustainability-focused metrics were identified through an electronic systematic search. Food-based 'a priori' dietary metrics developed to assess diet quality among free-living, healthy children and/or adults at individual or household level were included. The 16 guiding principles to achieve sustainable healthy diets developed by the Food and Agriculture Organisation of the United Nations and the World Health Organisation in 2019 were used as a framework to assess the metrics.

Results: A total of 48 diet quality metrics were assessed. The analysis revealed a strong alignment of the metrics with health-related guiding principles (particularly Principles 2–4), but a critically weak alignment with principles related to environmental and sociocultural aspects (except Principle 14).

Conclusions: No existing dietary metric captures all components of sustainable healthy diets. Notably, the significance of ultra-processing, environmental and cultural aspects of diets is generally understated. These results highlight the importance of revising current dietary recommendations, especially to include emerging topics.

Contact Author: Priscila Machado, p.machado@deakin.edu.au

ID: 57 | Bold, transformative changes are required to make foodservices more environmentally sustainable: A framework guide

Kristen Mackenzie-Shalders¹, Madison Smeltzer¹, Alexandra Davidson¹, Dianne Reidlinger¹

¹Bond University

Background: Foodservices are a strong contributor to global environmental impact. There are calls for systemic change and change champions (emergent leaders) such as dietitians can lead the transformation towards environmentally sustainable foodservices. However, guidance through established channels such as consultancies that support foodservices to be more environmentally sustainable would be beneficial to inform change.

Aim: To discuss environmentally sustainable strategies being proposed by consultancies who support foodservices and a developed practical application framework.

Methods: Ten consultancies specialising in supporting foodservices to enhance their environmental sustainability were approached to participate in an electronic survey and extended interview. Demographics were collected via survey and the interviews explored the experiences of the consultancies in supporting foodservices to be more environmentally sustainable. Interviews were transcribed and coded line-by-line using a constructivist grounded theory approach to generate themes and then a framework.

Results: A framework was developed including an overarching theme of 'Transforming the Food Service System': four themes were identified including Embedding Leadership, Shifting Perspective, Constructing Collaborative Networks, and Fostering Momentum. Each theme included actionable strategies for foodservices to be more environmentally sustainable.

Conclusions: Bold, transformative changes across an organisation are required to make foodservices more environmentally sustainable. It is recommended that dietitians and other change champions/emergent leaders apply the developed framework when implementing environmentally sustainable strategies in foodservices.

Contact Author: Kristen Mackenzie-Shalders, kmackenz@bond.edu.au

ID: 70 | Enhancing nutrition research: Evaluation of the Health Advisory Panel for Youth at University of Sydney

Mariam Mandoh¹, Stephanie Partridge¹

¹University of Sydney

Background: Healthy adolescents play a central role in sustaining economic and social stability of societies. There is a critical need for advocacy and leadership initiatives to collaborate with adolescent consumers to improve the value and impact of nutrition research that affects them.

Aim: To evaluate the effect of participation in a nutrition research youth advisory group on adolescent's leadership skills and perceptions, and the process of establishing a youth advisory group.

Methods: A 12-month pre-post-study with mixed-methods evaluation. The youth advisory group was designed as a leadership initiative with the framework collaboration informed by Youth Participatory Action Research principles and guidelines on adolescent participation and civic engagement. Participants are current members of the HAPYUS youth advisory group, aged 13–18-years and live in NSW. Data evaluating participatory outcomes including perceptions, skills and collective participation was collected via online surveys and semi-structured interviews. Data were collected at baseline and will be compared at 6- and 12-months follow-up.

Results: In total 13/16 youth advisors agreed to participate in the study (62% female, mean age 16-years, SD: 1.3). To date, survey and interview data indicate participatory outcomes related to leadership self-efficacy are higher than general self-efficacy. Adolescents perceive their views worth listening to, however report to be listened to least in community settings. Analysis and thematic coding of baseline data is in progress.

Conclusions: This study will increase understanding of adolescent engagement in nutrition research. Findings will inform future nutrition research and adolescent engagement initiatives for health promotion.

Contact Author: Mariam Mandoh, mman5266@uni.sydney.edu.au

ID: 118 | A pro-inflammatory diet is associated with increased likelihood of central nervous system demyelination in women

Adriana Mannino¹, Fiona E Lithander^{2,3}, Eleanor Dunlop¹, Samuel Hoare⁴, Alison Daly¹, Michael Phillips⁵, Jill Sherriff¹, Robyn Lucas³, Anne-Louise Ponsonby⁶, James Herbert⁷, Ingrid Van Der Mei⁸, Lucinda Black¹, Nitin Shivappa

¹Curtin University, ²University of Bristol, ³University of Auckland, ⁴The Australian National University, ⁵The University of Western Australia, ⁶The University of Melbourne, ⁷University of South Carolina, ⁸University of Tasmania

Background: While a number of studies have examined associations between dietary factors and risk of multiple sclerosis (MS), little is known about intakes of inflammation-modulating foods and nutrients and risk of MS.

Aim: To test associations between the Dietary Inflammatory Index (DII®) and risk of a first clinical diagnosis of central nervous system (CNS) demyelination (FCD) (267 cases, 507 controls) using data from the Ausimmune Study.

Methods: The 2003–2006 Ausimmune Study was a multi-centre, matched, case–control study examining environmental risk factors for an FCD, a common precursor to MS. The DII is a well-recognised tool that categorises individuals' diets on a continuum from maximally anti-inflammatory to maximally pro-inflammatory. The DII score was calculated from dietary intake data collected using a food frequency questionnaire. Conditional logistic regression models were used to estimate associations between DII and FCD separately for men and women. Initial models were adjusted for education, energy intake, BMI, dietary misreporting, smoking, serum 25-hydroxyvitamin D, and history of infectious mononucleosis; final models retained covariates remaining statistically significant at $p \leq 0.1$ (smoking, history of infectious mononucleosis).

Results: In women, a higher DII score, indicating a more pro-inflammatory diet, was associated with increased likelihood of FCD, with a 17% increase in likelihood of FCD per one-unit increase in DII score (adjusted OR 1.17, 95% CI 1.04–1.33). There was no association between DII and FCD in men (adjusted OR 0.88, 95% CI 0.73–1.07).

Conclusion: These findings suggest that a pro-inflammatory diet is associated with an increased likelihood of FCD in women.

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

ID: 148 | Exploring parents' interest and motivations for school provided meals in Australia

Alexandra Manson¹, Rebecca Golley¹, Brittany Johnson¹

¹Flinders University

Background: Australian schools follow a parent-provided, lunchbox model, with contents often not aligned with national dietary recommendations. There has been emerging stakeholder interest in transforming the school food system to a school-provided meals model, however parent interest is poorly understood.

Aim: To determine parents of school children's current school food behaviours and gauge motivations, and willingness to participate in Australian school meals.

Methods: This cross-sectional online survey recruited a convenience sample of parents with at least one child

aged 4–17 years. The survey captured education, household income and living location demographics, current school food practices, and open and closed questions on the potential school meal model. Data were analysed using descriptive statistics, Chi Square analyses, and coding of written response themes.

Results: Seventy-one diverse participants completed the questionnaire. Sixty-one parent respondents were interested in school meals, stating convenience ($n = 21$), school food environment ($n = 9$), variability ($n = 8$) and food security ($n = 6$) were key motivators. Preference for home-made lunches and nutrition/food safety concerns were motivators for maintaining a lunchbox model. Parents reported spending a median of \$4 (IQR 3.8, 7.5) daily on lunchboxes and were willing to spend \$4 (IQR 2, 5) on school meals. Parent characteristics, including income, employment status, region, or gender were not significantly associated (>0.05) with interest in school meals.

Conclusions: Most parents surveyed were interested, and willing to pay for a school-provided meal, with interest across all parent types and demographics. This preliminary data demonstrates an emerging parent interest in school meals; therefore research should aim to further understand parent perspectives.

Contact Author: Alexandra Manson, alexandra.manson@flinders.edu.au

ID: 67 | Assessing food allergy management in Australian Early Childhood Education and Care Long Day Care services

Tiana Marrollo¹, Sandra Vale², Merryn Netting³, Louisa Matwiejczyk¹

¹Flinders University, ²National Allergy Strategy, ³SAHMRI

Background: The global increase in food allergy prevalence most commonly affects young children. In Australia, nearly 50% of children under five attend Early Childhood Education and Care services. Given the most utilised service of Long Day Care can provide up to two-thirds of children's nutrition, it is crucial services can manage food allergies and anaphylaxis appropriately.

Aim: To assess Long Day Care services management of and readiness to manage food allergies and anaphylaxis.

Methods: A 63-item survey conducted by the National Allergy Strategy, was emailed to 8333 Long Day Care services nationally to be completed by directors or managers. The cross-sectional survey included multiple-choice and open-ended questions primarily addressing knowledge, policies and practises, training, skills, and staff confidence. Poststratification weighting was performed and data were

analysed using descriptive statistics and summative content analysis.

Results: A total of 615 Long Day Care services undertook the survey with 89% ($n = 480/537$) having at least one child with food allergy enrolled and 74% ($n = 389/523$) children with multiple food allergies. The Long Day Care services surveyed were not fully prepared to manage food allergies and anaphylaxis. Thirty percent of services did not require staff to undertake anaphylaxis training ($n = 345/494$); however, when compared services requiring training, a high level of confidence in managing food allergies remained (no statistically significant differences). A key barrier to food allergy management was food provision with concerns about child safety and increased burden on cooks.

Conclusions: Long Day Care services must prioritise compliance with legislation and best guidelines to create a safer environment for children.

Contact Author: Tiana Marrollo, tiana.marrollo@outlook.com

ID: 193 | Bold steps to transform Hospital Meals across the lifespan

Kathryn Marshall¹, Vicki Barrington²

¹Western Health, ²Latrobe University

Background: Providing a suitable menu that meets the needs from birth to aged care is a significant challenge for hospital food service operation. The opportunity to create a transformative food service model presented during the Women's & Children's (W&C) Hospital development in 2018. Dietitian involvement was central to the meal design, working closely with food production team to develop a menu of complete frozen meals. This menu was able to be refined to suit an aged care site, including the introduction of frozen shaped texture modified foods; and implemented in mid-2021.

Aim: To evaluate an innovative food service model of complete meals offered as an a la carte menu.

Methods: Patient's meal experience, plate wastage, nutritional intake and cost were evaluated and compared to the previous cook-chill meal service.

Results: Patient meal experience increasing to over 80% satisfaction in both W&C hospital and aged care wards, compared to 56% previously.

Individual plate wastage was 18% in the W&C hospital, and aged care patients wasted less food (21% vs. 37%) following the introduction of this model. Overall cost savings were made through the elimination of food wastage

during meal plating. Nutritional intake was maintained compared to traditional menu in aged care patients.

Conclusions: A food service model that is adaptable, sustainable and able to improve the meal experience for patients can be achieved with imaginative dietetic input which is essential to ensuring menu design is tailored to diverse age groups as well as therapeutic and cultural dietary needs.

Contact Author: Kathryn Marshall, kathryn.marshall@wh.org.au

ID: 56 | 'We work in silos': Clinicians' perspectives of dietary service provision for diabetes and heart disease

Hannah Mayr^{1,2,3,4}, Holly Savill³, Lynette Law^{3,5}, Katrina Campbell⁶, Jan Hill¹, Michelle Palmer⁶, Ingrid Hickman^{1,4}, Jaimon Kelly⁴

¹Princess Alexandra Hospital, ²Metro South Health, ³Bond University, ⁴University of Queensland, ⁵La Trobe University, ⁶Metro North Hospital and Health Service, ⁷Queensland Health

Background: Clinical guidelines include dietary modification as a core part of management for type 2 diabetes (T2D) and coronary heart disease (CHD). How dietary care is prioritised and delivered to patients with these conditions in routine healthcare settings is unclear.

Aim: To explore perspectives of multidisciplinary clinicians on roles, practices and available services in the dietary management of T2D and CHD.

Methods: Semi-structured interviews were conducted with 57 clinicians (21 nurses, 19 doctors, 13 dietitians and 4 physiotherapists) managing relevant patients across hospital and community settings in a metropolitan health service in Queensland. Interviews were audio-recorded, transcribed verbatim and analysed using thematic analysis.

Results: Three themes with ten subthemes were identified. 'Treatment prioritisation' highlighted that despite the important role of nutrition there were competing priorities with complex patients; weight loss is a broad priority; and dietitians individualise priorities. 'Diverse roles in providing diet advice' identified a tension between nutrients, restrictions and diet quality; recommendations were siloed to diseases despite multimorbidity; and patients seek and trust advice from non-dietitians. 'Dietitian access' highlighted there was variable integration and resourcing of dietitians; with access governed by clinician discretion and perceived patient interest and bespoke application of referral pathways.

Conclusions: Time and resource constraints on prioritising diet, variable access and referral to dietitians, disease

and discipline silos, and inconsistent advice were key challenges in the dietary management of CHD and T2D. Models of care may be improved with greater investment and integration of dietitians, including to provide professional support across disciplines and disease specialties.

Contact Author: Hannah Mayr, Hannah.Mayr@health.qld.gov.au

ID: 179 | What should graduate dietitians know about sustainable development?

Joanna McCormack¹, Lynda Ross², Noble Christy³, Shannon Rutherford¹, Andrea Bialocerkowski¹

¹Griffith University, ²Queensland University of Technology, ³The University of Queensland

Background: The United Nations Educational, Scientific and Cultural Organisation is entrusted to coordinate the global movement embedding the 17 Sustainable Development Goals (SDGs) into education. However, the current literature examining how dietitians learn about sustainability does not reflect these goals. This is considered a 'know/do' gap, according to the Knowledge to Action Framework.

Aim: To synthesise the opinions of Australian food and environment experts on the content to include in dietetic education. The primary research questions were: (1) which of the Sustainable Development Goals relate to Nutrition and Dietetics, and (2) what knowledge, skills and attitudes should graduates possess?

Methods: Australian experts in food and environment were invited to participate in a focus group which use the Nominal Group Technique to discuss SDGs, and dietetic education. The data for each question were then ranked by the participants to determine consensus and priorities.

Results: Preliminary data suggests most SDGs are relevant to dietetics. The focus groups identified and prioritised the knowledge, skills and attitudes related to each of those SDGs that graduate dietitians should develop throughout their studies. There was consensus that students should graduate with a deep understanding of the impact of their professional activities on food system sustainability, food security, consumer waste, and climate change.

Conclusions: Redevelopment of curricula may be needed to support graduate dietitians to work through the lens of sustainability and be confident in advocating for change. Further research needs to be conducted to

examine the barriers and enablers to embedding this content into curricula.

Contact Author: Joanna McCormack, j.mccormack@griffith.edu.au

ID: 184 | Utilising technology and delegation to proactively manage malnutrition in a Digital Hospital

Simone McCoy¹, Amanda Adams, Hannah Olufson^{1,2}, Jennifer Ellick¹, Adrienne Young^{1,2}

¹Metro North Health, ²The University of Queensland

Background: With increasing demands on dietetic services, there is a need for novel malnutrition models of care (MOC) that meet both patient and service needs. Dietetic Assistant (DA) models are commonly used to support malnutrition screening and nutrition care. The opening of a new digital hospital provided an opportunity for automated delegation and integrated digital systems to provide efficient and effective nutrition care.

Aim: To describe the implementation of a new malnutrition MOC at the Surgical, Treatment and Rehabilitation Service in Brisbane, Australia.

Methods: The Malnutrition MOC was developed to identify patients at risk of malnutrition (Malnutrition Screening Tool) and nutritional decline (intake tracking at all meals), with digital systems leveraged to generate automated referrals to DAs. Protocols support DAs to assess and implement timely nutrition actions, with clear escalation points to the Dietitian. Training included simulations, and clinical task instructions were used to assess competency. Evaluation included a hospital-wide cross-sectional malnutrition audit and survey to determine DA satisfaction and confidence.

Results: Automated delegation to DAs represented on average 28% of all Dietetics referrals. Malnutrition prevalence was 11.8% among general rehabilitation patients. No patients were identified as having hospital acquired malnutrition. DAs reported receiving adequate training and a high degree of confidence in completing delegated tasks.

Conclusion: Low incidence and prevalence of malnutrition in our facility suggests that the new MOC has been successful in managing malnutrition in an efficient manner under a DA delegation model. Exploration of pathways to support patients with metabolic risk factors is warranted.

Contact Author: Simone McCoy, simone.mccoy@health.qld.gov.au

ID: 112 | Development of interactive cancer nutrition care resources through a co-design process with patients, carers and health professionals

Rebecca McIntosh¹, Jill Francis², Vanessa Hughes¹, Jane Stewart¹, Alexis Butler¹, Samantha Chandler³, Keith Donahue³, Andrea Elliott^{4,5}, Tanith Lamaro⁶, Kate Kaegi⁷, Helena Kelly¹, Nicole Kiss⁸, Katherine Lane⁹, Kathy Quade¹⁰, Liz Simkiss¹¹, Natalie Simmance¹², Wendy Swan, Tania Wohling¹¹, Jenelle Loeliger¹

¹Peter MacCallum Cancer Centre, ²University of Melbourne, ³Consumer Representative, ⁴Eastern Health, ⁵Monash University, ⁶Access Health & Community, ⁷Austin Health, ⁸Deakin University, ⁹Cancer Council Victoria, ¹⁰Western and Central Melbourne Integrated Cancer Services, ¹¹Victorian Government, ¹²St Vincent's Hospital Melbourne

Background: Variation in access and provision of nutrition information to cancer patients exists.

Aim: To develop interactive cancer nutrition resources to meet the needs of patients, carers and health professionals, to support optimal nutrition care.

Methods: Eligible cancer patients, carers and multidisciplinary health professionals (target $n = 20$) were invited to participate in four virtual workshops (via Zoom™) in June–September 2021, utilising experience-based co-design methods. An iterative process was undertaken (workshops 1–4) to identify nutrition information priority areas, design and refine resources. Workshop participants were invited to complete a purpose-designed questionnaire based on the Theoretical Framework of Acceptability to measure end-user acceptability of resources at the conclusion of co-design workshops 2–4.

Results: Twenty participants ($n = 10$ patients/carers, $n = 10$ HPs) attended workshops 1–4 and 46 new resources were developed. Formats included a postcard, infographic factsheets, animations and patient/carers and health professional toolkits. As rated by workshop participants, resource acceptability increased across all seven Theoretical Framework of Acceptability domains between workshops 2 to 4. Patients/carers and health professionals reported high intervention coherence with 97% agreeing or strongly agreeing that 'content in the resources was easily understood and made sense', and lowest ratings for self-efficacy with 76% agreeing or strongly agreeing that 'using the resources increased confidence in accessing nutrition information and/or nutrition care'.

Conclusions: New interactive cancer nutrition resources have been co-designed resulting in high acceptability to patients, carers and health professionals. The resources will undergo end-user clinical utility testing across multiple health settings to assess acceptability in a 'real-world' setting.

Contact Author: Rebecca McIntosh, Rebecca.McIntosh@petermac.org

ID: 108 | The family meal; a practice frozen in time

Georgia Middleton, Rebecca Golley¹, Karen Patterson¹, John Coveney²

¹Flinders University, ²Caring Futures Institute, Flinders University

Background: The family meal is an institution in family life; a tradition spanning decades and a widely promoted healthful activity. However, there are limited investigations into the impact this tradition has on contemporary families, and how the family meal has changed along with evolutions to family life.

Aim: To gain an understanding of the evolution of the family meal in South Australia over the last 30 years.

Methods: Qualitative semi-structured interviews were conducted with South Australian parents in the 1990s and in 2020. Grounded theory informed the collection and analysis of these two temporal datasets.

Results: Fifty-four parents from 28 families participated. The analysis indicated stability in many family meal practices over time. Key differences included time available to make the meal, and cost of ingredients being more acutely considered in the 2020 sample, and schedules of family members becoming harder to reconcile. While more fathers were involved in family meal practices in 2020, in many cases women were still undertaking the majority of this work, as in the 1990s.

Conclusions: The family meal remained surprisingly consistent considering the changes to family life over this time, with changes seen in the increasing external pressures of time, cost, and schedules. The family meal as an institution remains strong and while there is progress towards a more equitable division of responsibility, this has not yet been achieved. Providing adequate targeted supports, policies, and resources to families will help reduce these pressures and allow them to

achieve healthy outcomes associated with the family meal.

Contact Author: Georgia Middleton, georgia.middleton@flinders.edu.au

**ID: 37 | Can whole grains reduce inflammation?
A systematic literature review of randomised
control trials**

Genevieve Milesi¹, Sara Grafenauer², Anna Rangan³

¹The Slate Health, ²UNSW, ³University of Sydney

Background: Whole grain foods provide a range of benefits; rich in nutrients, dietary fibre, a range of antioxidants, and phytochemicals, and in addition consumption of such foods has the potential to act in an anti-inflammatory manner, possibly helping to relieve the impact of chronic disease risk.

Aim: To review the effects that whole grain consumption specifically has on selected inflammatory markers from adult human clinical trials.

Methods: As per the Preferred Reporting Items for Systematic Reviews protocol, the online databases MEDLINE, Embase, Cochrane, CINAHL, and Scopus were searched from inception through to 31 August 2021. Randomised control trials (RCTs) ≥ 4 weeks in duration, reporting ≥ 1 of the following: C-reactive protein (CRP), interleukin-6 (IL-6), and tumour necrosis factor (TNF), were included.

Results: In total 31 RCTs were included, with 16 studies from overweight/obese populations, 12 with pre-existing conditions, two from a healthy population, and one study of participants with prostate cancer. Three studies within the 31 RCTs, had two intervention arms. A total of 32 individual studies measured CRP where 10/32 found significant differences between control and intervention arms where $p < 0.05$, 18 individual studies measured IL-6 (2/18 were significant), and 13 individual studies measured TNF (5/13 were significant).

Conclusions: Overall, consumption of whole grain foods had a moderate effect in reducing inflammatory markers particularly CRP, and less frequently IL-6 and TNF. With obesity rates increasing both in Australia and globally, research into dietary interventions such as this study helps to progress that knowledge, pointing to future research considerations.

Contact Author: Genevieve Milesi, genevieve@theslate.health

**ID: 199 | How to prepare graduates for the future
dietetics workforce? A qualitative exploration of
placement redesign**

Lana Mitchell¹, Roshan Rigby¹, Bryce Brickley¹, Emily Williams¹, Monica Hanna¹, Peta Patterson¹, Lauren Williams¹

¹Griffith University

Background: In Australia, most dietetics programs utilise hospitals and community and public health agencies for the required 100 days of placement. Accreditation standards no longer specify the amount of time to be spent in these sites. This provides an opportunity to embed other sites within the placement program.

Aim: To explore stakeholder views of non-traditional and role-emerging sites for placement reorganisation at Griffith University.

Methods: Qualitative enquiry following COREQ guidelines was used to seek the views of stakeholders involved in dietetics education (students, graduates, supervisors, educators). Interviews were conducted using a semi-structured protocol, audio-recorded and transcribed verbatim, then coded using NVivo. Reflexivity was used collaboratively to ensure consistency for thematic analysis.

Results: Fifty-four stakeholders participated in an individual interview ($n = 21$) or focus group ($n = 33$): students ($n = 22$); graduates ($n = 13$); potential supervisors ($n = 14$); and educators ($n = 5$). Interviewees strongly supported opportunities to enhance employability of the future workforce. Currently under-utilised sites were identified as private practice, aged care, food industry/providers, childcare and schools, government, not-for-profit and private organisations, and the sporting industry. Stakeholders were keen for students to explore their passion and develop confidence in relevant skills for their ideal job, but not all were happy to extend placement length to achieve this. Supervisors were supportive of expanding sites, provided it did not compromise time spent in traditional sites.

Conclusions: Expanding professional placement opportunities into non-traditional and role-emerging areas may enhance graduate employability and align with workforce trends. These findings will be used in the next phase to inform a codesign placement model.

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

ID: 203 | Meal ordering at your fingertips: do patients participate?**Kate Morgan**¹, Claire Dux², Bianca Neaves¹¹Queensland Health, ²Royal Brisbane and Women's Hospital

Background: Meal ordering processes in acute healthcare are becoming increasingly digitised. At a tertiary hospital in Brisbane, Dietetic Assistants spend ~26 h per day ordering meals for 929 patient beds. A spoken menu is used and entered into an electronic patient meal system. Ten percent of meals are ordered as default due to patients not being at their bed at ordering time. To resolve these issues, in November 2021, MyMeals was implemented, allowing patients to order meals electronically on their own devices.

Aim: To assess the uptake and acceptability of patient self-ordering.

Methods: Pre-implementation studies were undertaken on the maternity wards. After the refinement of marketing materials and configuration, rollout across the facility was completed in January 2022. Data were collected from January–February 2022, including the numbers of meals ordered via the various methods and qualitative patient feedback.

Results: 57345 meal orders were placed and MyMeals represented 5% ($n = 2854/57345$). Default orders decreased (7%, $n = 4123/57345$). Maternity use of MyMeals was highest (48%, $n = 1376/2854$). Surprisingly, despite coinciding with a COVID-19 peak resulting in patients being phoned for meals, the infectious disease ward had the lowest uptake (0.2%, $n = 5/2854$). Patients used MyMeals for 1–29 days of their admissions. Qualitative feedback was largely positive.

Conclusions: The ability for patients to order their own meals was well received. Similar to other studies, uptake was better on the pilot ward. Evaluation of changes in dietetic assistant time is suggested to assist in redirection of time into clinical support tasks.

Contact Author: Kate Morgan, kate.morgan3@health.qld.gov.au

ID: 129 | Making the MOST out of children's vegetable intake in long day care settings**Samantha Morgillo**¹, Dorota Zarnowiecki¹, Claire Gardner¹, Shalem Leemaqz², Lucinda Bell¹, Amber Kelaart³, Astrid Poelman⁴, Rebecca Golley¹¹Flinders University, ²South Australian Health and Medical Research Institute, SAHMRI Women and Kids, ³Nutrition Australia, ⁴Commonwealth Scientific and Industrial Research Organisation (CSIRO)

Background: Australian children are not eating sufficient vegetables. Interventions to increase children's vegetable intake have been effective in long day care settings, in particular multi-component interventions. However, their complexity presents challenges for adoption into practice. By testing different combinations of initiatives, the multiphase optimisation strategy (MOST) can overcome these challenges by identifying the most effective combination.

Aim: To identify the optimal combination of initiatives to increase children's vegetable intake in long day care.

Methods: A factorial trial was conducted in 2021 with 32 long day care centres in Adelaide trialling 8 different combinations of three initiatives for 12 weeks. The Initiatives targeted: 1-Food provision, 2-Mealtime environment, and 3-Curriculum. Children aged 2–5 years ($n = 681$) had their vegetable intake measured at 12 weeks using the weighed plate waste method for 1× meal and 2× between-meal snacks. Vegetable intake was compared to the control group using a ratio of the geometric mean. Staff-completed questionnaires determined completion rates and acceptability of the initiatives.

Results: The combined mealtime environment + curriculum group had the largest increase in vegetable intake (+0.36 serves/day) on average compared to the control group [ratio (95% CI) (3.29 0.96, 11.27), $p = 0.06$]. Completion rates for the curriculum (>93%) and mealtime environment (61%) initiatives were high for this group and overall acceptability was good (81%–82% of educators would recommend to others).

Conclusion: Interventions simultaneously targeting the mealtime environment and curriculum may be optimal nutrition promotion targets to increase children's vegetable intake. The effectiveness of this package will be evaluated in a randomised controlled trial in 2022.

Contact Author: Samantha Morgillo, samantha.morgillo@flinders.edu.au

ID: 160 | Usual nutrient intake distribution and prevalence of inadequacy among Australian children 0–24 months**Najma Moumin**¹, Merryn Netting², Rebecca Golley³, Chelsea Mauch³, Maria Makrides¹, Tim Green¹¹South Australian Health and Medical Research Institute, ²SAHMRI, ³Flinders University

Background: Breastmilk provides complete nutrition until 6 months. After that, complementary foods are needed to meet increased energy and nutrient requirements. Poor complementary food choices may lead to impaired growth and neurodevelopment. Yet, there are

no national surveys assessing nutritional adequacy in Australian children <24 months.

Aim: The Australian Feeding Infants and Toddlers Study (OzFITS) 2021 aimed to describe usual energy and nutrient intake distribution in Australian children 6–24 months and infants <6 months consuming complementary foods and/or formula.

Methods: OzFITS 2021 was a national cross-sectional survey of children aged 0–23.9 months ($n = 976$). Dietary intakes were assessed using a one-day food record, with repeats (30%) in a random subset. Usual energy and nutrient intake distributions were estimated using the Nutrient Reference Values for Australia and New Zealand.

Results: Children consumed ~10% more energy than predicted based on their Estimated Energy Requirements. For most nutrients, intakes were above the Adequate Intake or Estimated Average Requirement (EAR). Exceptions were iron and zinc for infants 6–11.9 months where 90% and 20%, respectively, were below the EAR. Toddlers 12–24 m had a lower prevalence of inadequacy for iron at 25%. One third of toddlers exceeded the upper limit (1000 mg/day) for sodium. Of infants <6 months, 18% and 43% exceeded the upper limit for vitamin A and zinc.

Conclusions: Diets were sufficient for most nutrients; however, the high prevalence of inadequacy for iron, especially in infants 6–11.9 months, is concerning. Excessive sodium intake among toddlers may lead to a preference for salty foods.

Contact Author: Najma Moumin, najma.moumin@sahmri.com

ID: 147 | Effect of anti-inflammatory diets on inflammation markers in adult human populations

Mitali Mukherjee^{1,2,3}, Chad Han¹, Shawgi Sukumaran¹, Christopher Delaney⁴, Michelle Miller

¹Flinders University, ²Southern Oncology SA, ³Mani Physiotherapy, ⁴Southern Adelaide Local Health Network

Background: Several chronic conditions such as obesity, metabolic syndrome, cardiovascular disease, certain cancers and diabetes are related to chronic inflammation. Diet can influence the levels of anti-inflammatory and pro-inflammatory cytokines and chemokines in the body.

Aim: To explore the effects of anti-inflammatory diets on inflammation markers in adult populations.

Methods: Five databases, MEDLINE, PubMed, Emcare, Cochrane and CINAHL were searched to locate randomised controlled trials that used whole food anti-inflammatory diets as intervention and measured pre and post intervention levels of inflammation markers.

Results: Two independent researchers screened 1537 randomised controlled trials and 20 articles were included in the systematic review to be assessed qualitatively. Statistically significant and clinically meaningful between group changes were demonstrated in the intervention group for IL-6, CRP, hsCRP, IL-1 α , IL-1 β , IL-4, IL-8, IL-10, IFN γ , TNF α , IL-5, IL-7 and IL-18 as compared to control group.

Conclusions: Diet, inflammation markers and disease outcomes may be linked. Further research using consistent randomised controlled trial protocols will be useful in determining whether dietary intervention could act as prophylaxis for adverse clinical outcomes related to inflammation.

Contact Author: Mitali Mukherjee, mitali.mukherjee@flinders.edu.au

ID: 237 | Ongoing benefits from remote dietitian access – Supporting and maintaining dietetics services during a natural disaster

Eryn Murray¹, Angela Vivanti¹, Ra'eesa Doola¹, Jan Hill²

¹Princess Alexandra Hospital, ²University of Queensland

Background: Natural disasters are occurring with increasing frequency. Remote access to electronic health records, applications and cloud-based team collaboration software had been previously implemented in response to the COVID-19 pandemic and is routinely used within the department of a tertiary teaching hospital.

Aim: To evaluate the impact of dietitian remote access on the need for special leave and the days worked remotely in lieu of special leave due to wide-spread flooding.

Methods: Data were collected over two work days when multiple capital city roads were impassable and schools were closed. All staff within the dietetics department have remote access (dietitians, dietetic assistants, administrative officers, 26.9 full-time equivalent staff).

Results: There were nine individuals unable to attend the workplace due to flood water limiting road access. Two individuals required a total of 3 days special leave. However, seven individuals worked 11 days remotely in lieu of requiring special flood leave.

Conclusions: Remote access successfully minimised the impact of the 2022 floods within the department. Over 2 weeks of workforce productivity was retained in just 2 days. Following the application of remote access during the COVID-19 pandemic, the department is experienced at redistributing activities for enabling the

productivity of those working remotely. Remote access has demonstrated its value to departmental dietetic service delivery beyond its initial implementation in response to COVID-19.

Contact Author: Eryn Murray, Eryn.Murray@health.qld.gov.au

ID: 191 | Missed opportunities for nutrition care in COPD patients across the healthcare continuum

Samantha Ness¹, Philip Masel², Peter Collins³, Jack Bell⁴

¹University of Queensland, ²The Prince Charles Hospital, ³Mater Health, ⁴Queensland Health

Background: A concurrent diagnosis of COPD and malnutrition adversely influences clinical outcomes and healthcare costs. Whether nutrition care processes for COPD patients with, or at risk of malnutrition are extended beyond the acute care setting remains unclear.

Aim: To identify current practices and gaps in care delivery across the healthcare continuum for COPD patients with, or at risk of malnutrition admitted to a tertiary hospital thoracic ward.

Methods: Chart audits were conducted for consecutively recruited patients with, or at risk of malnutrition, as defined by validated tools. A standardised, pre-piloted form was used to extract information on nutrition care processes from medical documentation following discharge. A follow-up phone survey with face validity was then conducted between six and 8 weeks post-discharge.

Results: Preliminary inpatient data identified foregone opportunities for nutrition care included nil documented nutrition assessment (5/12), nil provision of oral nutrition supplements (7/12), 'malnutrition' or 'nutrition' not included in the Electronic Discharge Summary (11/12), and nil referrals for post-discharge nutrition care (8/12). All follow-up survey participants ($n = 9$) reported that as an inpatient, they were not actively involved in developing a post-hospital nutrition care plan. Post-discharge, reported receipt or access of nutrition information from any source (1/9) and use of oral nutrition supplements (2/9) was very low; self-monitoring weight (6/9) and dietary intake (4/9) were also less than desirable.

Conclusions: Findings highlight opportunities for improvement in the delivery of nutrition care, across the continuum. Future project phases aim to explore barriers,

enablers, and potential approaches for improving the coordination of care between healthcare settings.

Contact Author: Samantha Ness, samantha.ness@uqconnect.edu.au

ID: 53 | Do dietitians risk overprescribing energy for people with spinal cord injury who have pressure injuries?

Amy Nevin¹

¹Princess Alexandra Hospital

Background: The energy needs of people with spinal cord injury (SCI) who have pressure injuries are poorly understood and the impact of surgical repair unknown. Unvalidated energy prediction equations are commonly used for this population.

Aim: To observe resting energy expenditure (REE) in people with SCI undergoing surgical repair of pressure injuries and compare pre-surgery REE with energy prediction equations.

Methods: Indirect calorimetry measured REE pre-surgery, post-surgery, at suture removal and hospital discharge. A change of >10% from pre-surgery REE was considered clinically important. Pre-surgery REE was compared to eight energy prediction equations using Lin's concordance correlation coefficient (r_c) (good $r_c > 0.6$; high $r_c > 0.8$) and mean absolute percentage error (MAPE). Fat-free mass (FFM) was measured pre-surgery (bioimpedance spectroscopy) for inputting into three of the equations.

Results: Twenty people underwent pressure injury surgical repair (95% male, mean age 56 ± 12 years, 70% paraplegia). Between pre-surgery and discharge, REE increased (mean difference = +118 kcal/d, $p = 0.005$), but this was not clinically important with <10% change at any timepoint. Energy prediction equations based on body weight overestimated energy requirements ($r_c = < 0.4$, MAPE 16.4%–47.6%), while an equation incorporating measures of FFM showed greatest agreement ($r_c = 0.779$, 95% CI: 0.437, 0.924, MAPE 3.6%).

Conclusion: The presence of pressure injuries or surgical repair did not impact REE and energy prediction equations incorporating measures of FFM performed best. Traditional energy prediction equations incorporating body weight overestimate energy needs and dietitians should use caution when prescribing energy targets in this population.

Contact Author: Amy Nevin, amy.nevin@connect.qut.edu.au

ID: 253 | Trends in package sizes of savoury snacks: Exploring euromonitor and industry perspectives

Hei Man Emily Ng¹, Jessica Xu¹, Qingzhou Liu¹, Anna Rangan¹

¹The University of Sydney

Background: An increase in discretionary food serving sizes has provided an eating environment conducive to excessive energy intake and subsequently, increased likelihood of obesity and related co-morbidities. The savoury snack category was chosen in this review as it is one of the most commonly consumed types of snacks and is available in a variety of different package sizes.

Aim: To determine changing trends in sales and package sizes of savoury snacks, and to investigate industry perspectives for these changes in Australia, the USA, Japan and Hong Kong.

Methods: Sales data (units per capita) between 2006 and 2020 on savoury snacks were extracted from the Euromonitor International database. Industry perspectives on package size changes were extracted systematically following the PRISMA-ScR guidelines from selected marketing databases, company reports and related websites.

Results: Savoury snacks of all package sizes increased in total sales per capita across all four countries between 2006 and 2020. Asian countries exhibited a consistently higher proportion of smaller package (<100 g) sales compared with western countries (Japan-83.3%, Hong Kong-64.4%, Australia-44.3%, the USA-20.2%), but changes in the proportion of small (<100 g) versus large (>100 g) package size sales in each country over time were minimal. Industry perspectives showed increasing health consciousness trends and consumer demands for convenience and portion control as the main contributors to decreasing package sizes of savoury snacks.

Conclusions: Per capita sales of savoury snacks increased across all four countries of interest with variation in popular package sizing between Asian and western countries.

Contact Author: Hei Man Emily Ng, heng0680@uni.sydney.edu.au

ID: 76 | A systematic review of the ins and outs of nut energy balance

Cassandra Nikodijevic, Elizabeth Neale, Yasmine Probst¹, Sze-Yen Tan²

¹University of Wollongong, ²Deakin University

Background: Nuts are an energy-dense food, yet habitual consumption is not associated with weight gain.

Examination of mechanisms which may explain the lack of effect of nut consumption on body weight is needed.

Aim: To examine the metabolisable energy of tree nuts and peanuts (review 1), and the effect of nut consumption on energy compensation and energy expenditure (review 2).

Methods: PubMed, MEDLINE, CINAHL, Cochrane, and Embase databases were searched to June 2021. Human studies (adults >18 years) were included for both reviews, while in vitro studies were only included for the metabolisable energy review.

Results: Twenty-four studies on metabolisable energy, and 32 on energy intake compensation and expenditure were included. These studies included a variety of tree and ground nuts. The metabolisable energy of nuts was consistently lower than that predicted by Atwater factors due to incomplete lipid release and higher faecal fat excretion (review 1). The energy within nuts was partially compensated for at subsequent meals, and nut consumption had varied effects on energy expenditure (review 2).

Conclusion: The lack of associations between nut intake and body weight appears to be attributed to lower-than-expected metabolisable energy, and compensation in energy intake and expenditure following nut ingestion, raising concerns over the accuracy of Atwater factors for estimating energy content of nuts.

Contact Author: Cassandra Nikodijevic, cassandra.nikodijevic@gmail.com

ID: 91 | A new bold look for nutrition care for dialysis patients in community settings

Kate O'Brien, Willett Kirsten, Jelena Puskarica, Claire Speer

Canberra Health Services

Background: International kidney nutrition guidelines support a lower number of nutrition screens and assessments annually than was standardly occurring for Canberra Health Services dialysis patients. In 2021 an evaluation of dialysis nutrition services occurred to inform developing an improved care model aimed at achieving better patient health outcomes.

Aim: To develop a nutrition model of care for dialysis patients that: meets international guidelines; optimises workforce skills and efficiency; aligns with patient expectations; and achieves low malnutrition rates.

Methods: International kidney nutrition guidelines were compared to departmental processes to address differences. Nutrition service benchmarking occurred by analysing malnutrition data for dialysis patients between 2018 and 2020 and comparing this to survey results from local and international studies. Staff acceptability with processes was assessed by analysing focus group themes. Analysis of patient interview data provided information on patients' expectations for services.

Results: Malnutrition rates in the health service dialysis units were lower than rates reported in the literature. Despite relatively low malnutrition rates a new care model was designed using study findings. New nutrition risk screens to prioritise patients at highest risk and reducing the frequency of individual dietetic assessments for lower risk patients to create staffing capacity for conducting health promotion activities for all dialysis patients are key parts of the model.

Conclusions: Wide consultation produced a new model of care for dialysis patients with capacity for both individual care and health promotion activities. Systems for evaluating the model including automated malnutrition rate reports to monitor trends have been built into the new model.

Contact Author: Kate O'Brien, kate.o'brien@act.gov.au

ID: 202 | Impact of a healthier food and drinks directive on consumer satisfaction with retail food services

Sara O'Neill¹, Melinda White¹, Megan Farquhar¹, Kristie Bell¹

¹Children's Health Queensland Hospital and Health Service

Background: In January 2020 Queensland Health mandated the sale of healthy food and drinks at Healthcare facilities when the Healthier Drinks at Healthcare Facilities, Health Service Directive was expanded to include food. Food retailers were hesitant to implement the directive due to potential negative impacts on customer satisfaction and sales.

Aim: To gauge consumers (1) satisfaction with retail foodservices before and after implementation of the Health Service Directive, and (2) suggestions for improvements in retail foodservices within a healthcare facility.

Methods: Audits of compliance with the Health Service Directive and face-to-face surveys of customers within the food retail precinct in March 2020 and April 2021 were conducted. Surveys included 6 questions addressing overall satisfaction with retail food rated on five-point

Likert scales and open-ended questions regarding improvement opportunities.

Results: Surveys were completed by $n = 47$ participants (38% hospital staff) at baseline, and $n = 50$ (70% hospital staff) at follow-up who purchased food from retail outlets. There was no significant difference in satisfaction before and after implementation: 3.21 ± 1.18 compared to 3.46 ± 0.81 ($p = 0.231$). Improvements suggested by consumers included mostly 'green' options such as fresh sandwiches, salads, fruits and sushi. Following implementation, red foods decreased from 72% to 28%, and green foods increased from 11% to 45% of foods displayed.

Conclusions: This study demonstrated that improving the proportion of healthy foods available did not negatively impact consumer satisfaction. Consumer support was essential to build confidence in retailers to implement the Directive. Further investigation into the impact of the Health Service Directive on food sales is warranted.

Contact Author: Sara O'Neill, sara.oneill@health.qld.gov.au

ID: 26 | Development of affective learning in dietetics graduates: A qualitative longitudinal study

Marie-Claire O'Shea¹, Claire Palermo², Lauren Williams¹, Gary Rogers³

¹Griffith University, ²Monash University, ³Deakin University

Background: Affective learning, focusing on values, attitudes, respect and professionalism, is an essential skill for professional practice. Longitudinal studies are emerging within nursing and medicine; the research within allied health students remains scant. To develop the affective domain, simulation-based learning is one viable teaching methodology.

Aim: To investigate the value of simulation-based learning activities to develop affective learning among dietetic students.

Methods: A double hermeneutic, interpretative phenomenological approach, followed by analysis of participants' affective learning across three-interview time-points via the application of Krathwohl's Levels (receiving, responding, valuing, organisation and characterisation). Students participated in six simulation activities with human simulated participants, the year prior to professional placement. Interviews were conducted prior to and immediately after placement, and six-months after graduation.

Results: Simulation activities developed affective learning in 4 of 6 participants, in relation to their view of themselves as practitioners and their understanding of their

future responsibilities to patient care. Key themes were identified: (1) feeling of workforce readiness, (2) valuing lifelong learning, (3) attitudes towards interprofessional teamwork. Workforce readiness was directly attributed to simulated-learning activities. Participants described 'light bulb' moments, recalling specific experiences during placement that resembled simulations, and the profound impact the activity had on their practice. Similar stories were recalled after graduation, suggesting the lasting impact of simulation activities on their practice.

Conclusions: This study demonstrated the development of the affective learning domain as dietetic students transitioned into practicing health professionals. Simulation-based learning is one activity that enhances students' learning in the affective domain and educators should consider its value within their programs.

Contact Author: Marie-Claire O'Shea, m.oshea@griffith.edu.au

ID: 27 | How to undertake design-based research in dietetics

Marie-Claire O'Shea¹, Claire Palermo², Lauren Williams¹, Gary Rogers³

¹Griffith University, ²Monash University, ³Deakin University

Background: The design-based research methodological feature of linking theory to practical contributions, makes it a most suitable research methodology for health professional education research; yet the literature in this area remains scant. This methodology enables researchers to 'mix and match quantitative and qualitative methods in order to describe the phenomenon' rather than prescribing to a specific data collection or analysis method.

Aim: To showcase a modified Reeves (2006) Design-Based Research model to investigate the role of simulation in dietetics education, providing the clinician-researcher a practical and output-based methodological option.

Methods: A pragmatic research paradigm, using a design-based research methodology adapted from Reeves (2006) was employed. The approach included four phases using a range of methods; 1 Analysis of the problem, 2 Development of solutions, 3 Iterative cycles of testing, and 4 Reflection to produce design principles. The methodology was modified at Phase 2 to inform a possible solution to the research problem, rather than develop.

Results: In line with design-based research methodology, the four-phases of this modified model with in-built reflection at each stage resulted in both a theoretical output (simulation design principles) and practical outputs

(evidence-based checklist for simulation design and evaluation tool). The model has demonstrated genuine impact on practice using literature review, case studies and interpretative phenomenological approach.

Conclusions: This methodology enabled the researcher to identify a genuine problem, propose and test solutions in real-world settings, then produce outputs directly applicable to dietetics education. The flexibility of this research model has been demonstrated and clinician-researchers should consider this methodology for future research.

Contact Author: Marie-Claire O'Shea, m.oshea@griffith.edu.au

ID: 84 | Effects of a prebiotic supplement on child behaviour in ASD and parental quality of life

Jacqui Palmer¹, Heidi Staudacher², Jolieke van der Pols³, Karen Sullivan³, Rebecca Byrne³

¹University of Queensland, ²Deakin University,

³Queensland University of Technology

Background: Caring for a child with autism spectrum disorder (ASD) can be overwhelming. Emerging evidence suggests that gut bacteria could play a role in maladaptive behaviours and co-occurring gastrointestinal (GI) symptoms. Modifying gut bacteria to effect improvements in child behaviour could represent a simple and effective means of improving parental quality of life (QOL).

Aim: To assess the effect of modifying gut bacteria on behaviour, GI symptoms and sleep in children with ASD, and parental QOL.

Methods: Children aged 4–10 years with ASD participated in a 6-week double-blind pilot RCT and were randomised to take 2.4 g of prebiotic GOS or placebo daily ($N = 38$). Standardised nutrition counselling was provided to both groups. Gut bacteria were measured via stool samples using 16SrRNA sequencing, cortisol via saliva (using ELISA), with behaviour, GI symptoms and QOL assessed via parent-completed questionnaires at baseline and follow-up.

Results: Thirty-three parent child dyads completed the trial per protocol. The supplement was well tolerated, and Bifidobacterium increased significantly in the prebiotic group (1.4–5.9, $p < 0.001$). There was no significant difference between groups for any variable; however, both prebiotic and control groups reported improved mealtime behaviour (60% vs. 67%) and parental QOL (23% vs. 4%) from baseline.

Conclusions: This trial showed that it was possible to modify the gut bacteria of children with ASD with no adverse effects reported. This trial should be repeated

with a larger sample size. Inclusion of a qualitative component could identify reasons for enhanced QOL in all participants.

Contact Author: Jacqui Palmer, jacqui.palmer@uq.edu.au

ID: 168 | Relative validity of MyFitnessPal™ against an image-based mobile food record app™ in assessing dietary intake

Jeannie Pea¹, Ee Zin Woo¹, Fengqing Zhu², Carol Boushey³, Deborah Kerr¹, Janine Wright

¹Curtin University, ²Purdue University, ³University of Hawaii Cancer Center

Background: MyFitnessPal™ is a free, popular commercial dietary tracking mobile application using crowd-sourced food composition data of unknown accuracy.

Aim: To determine the relative validity of energy and macronutrient intakes assessed by MyFitnessPal™ against an image-based mobile food record app (mFR™) where dietary intake information was analysed using Australian food composition data (AUSNUT 2011–2013).

Methods: Adults living in Western Australia, aged 18–40 years, were recruited to complete a four-day dietary record simultaneously on both MyFitnessPal™ and the mFR™. Group mean intakes for energy and macronutrients were compared between the two methods using paired-tests and Pearson correlations. Bland–Altman agreement plots were used to assess agreement between methods.

Results: Thirty-two volunteers completed both methods (12 males, 20 females; mean age \pm SD 23.3 \pm 4.1 years). Moderate correlations for energy and all macronutrient intakes were found ($p < 0.05$). Mean energy intakes from MyFitnessPal™ and mFR™ were 6266 kJ/day (SD \pm 2154 kJ/day) and 7075 kJ/day (SD \pm 1842 kJ/day), respectively. Relative to mFR™, MyFitnessPal™ significantly underestimated mean energy (–809 kJ/day, 95% CI –1437, –181 kJ/day), protein (19.1 g/day, 95% CI –26.8, –11.5 g/day), total fat (–13.3 g/day, 95% CI –21.2, –5.4 g/day), and saturated fat (–8.8 g/day, 95% CI –11.2, –6.4 g/day) intakes. Wide limits of agreements for all nutrients assessed were observed.

Conclusion: MyFitnessPal™ underestimated energy and macronutrient intakes relative to the mFR™ and further investigations of validity are warranted. Dietitians have an important role in educating individuals on the limitations of crowd-sourced dietary tracking applications.

Contact Author: Jeannie Pea, 19 022 103@student.curtin.edu.au

ID: 105 | A sport and nutrition program for people with intellectual and developmental disabilities in Hong Kong

Sally Shi-po Poon¹, Tsau-jin Cheng¹, Kam-hung Tam¹, Charles Ming-chun Law¹, Violet Hon Man¹

¹Love 21 Foundation

Background: People with intellectual and developmental disabilities (IDDS) are more likely to experience nutritional challenges from an early age and have a greater risk for obesity and long-term health complications. Love 21 Foundation is a non-governmental organisation founded in Hong Kong that aims to empower the Down syndrome and autistic community by giving them an opportunity to reach their full potential through sports, nutrition and holistic programmes. Since 2021, we have received funding from the Hong Kong Jockey Club Charities Trust to lead a 12-month community-based program named the ‘Jockey Club Love Healthy Life Sport and Nutrition Programme’ for individuals with IDDS.

Aim: To report the outcomes of the program including dietary and exercise habits, cardiovascular fitness, waist circumference, body mass index (BMI), body composition, and health parameters.

Methods: A total of 58 individuals with IDDS including Down syndrome, autism spectrum disorder or other intellectual disabilities aged 23 \pm 7.7 were enrolled in the program. Participants and their caregivers attended 11 monthly dietetic consultations, 11 \times 1-h monthly group nutrition educational sessions, 9 \times 1.5-h monthly cooking workshops, and a minimum of 2 \times 60-min weekly exercise sessions.

Results: Significant improvements in waist circumference, BMI, body composition, serum alanine transaminase levels, serum low-density lipoprotein cholesterol levels, cardiovascular fitness, physical activity levels, and dietary habits were observed at the twelfth month.

Conclusions: Further larger randomised controlled trials are warranted to confirm the findings of this program.

Contact Author: Sally Shi-po Poon, sallypoon@personaldietitian.com.hk

ID: 49 | Extending the knowledge of nuts and CVD – can we emerge with a high-level health claim?

Yasmine Probst¹, Elizabeth Neale, Lauren Houston², Mamatha Chandra Singh

¹University of Wollongong, ²The George Institute

Background: The current regulatory environment prevents high-level health claims (HLHC) being made for nuts, despite their well-established cardiovascular disease (CVD) health benefits.

Aim: To conduct a systematic review and meta-analysis for the purpose of substantiating a food-health relationship.

Method: A systematic search was conducted using four scientific databases, to 26 September 2021. Thirty-four biomarkers, measures and clinical endpoints were used to assess CVD risk. Intervention trials with a control group, prospective cohort studies, and case-control studies were included. Using a random effect meta-analysis, the consumption of nuts was compared to the usual diet with no nuts or lower amounts of nuts.

Results: A total of 196 articles describing 182 studies, including 145 intervention studies and 37 observational studies were reviewed. Nuts were consumed in prescribed doses (3–168 g/day) or an individualised proportion of energy. The meta-analysis showed a significant decrease in LDL, total cholesterol, TC:HDL ratio, LDL:HDL ratio, ApoB, and triglycerides, and a significant increase in VCAM-1 and FMD, indicating a cause-and-effect relationship. Observational studies found a moderately consistent favourable association for risk of death from CVD and risk of CVD.

Conclusions: Nut consumption is beneficial to making positive changes to many biomarkers and endpoints of CVD, creating an overall risk reduction at an intake of 30 g/day. Despite the heterogeneity, studies display positive changes to a range of markers. Establishing a relevant HLHC may assist in improving the awareness of the benefits of nuts.

Contact Author: Yasmine Probst, yasmine@uow.edu.au

ID: 139 | Management of eating disorders for people with higher weight: Clinical practice guideline

Angelique Ralph¹, Belinda Caldwell, Leah Brennan, Sue Byrne, Jo Farmer, Laura Hart, Gabriella Heruc, Sarah Maguire, Milan Piya², Julia Quin, Sarah Trobe, AJ Williams-Tchen, Andrew Wallis, Phillipa Hay²

¹National Eating Disorders Collaboration, ²Western Sydney University

Background: The prevalence of eating disorders is high in people with high weight, particularly those presenting for weight-loss and with metabolic co-morbidities.

However, there is little to guide dietitians in the management of eating disorders in this population.

Aim: To synthesise the current best practice approaches to the management of eating disorders in people with higher weight and make evidence-based clinical practice recommendations. This is based on the premise that every person with an eating disorder is deserving of equitable, safe, accessible, and evidence-based care regardless of their body size.

Methods: The National Eating Disorders Collaboration Steering Committee auspiced a Development Group for Clinical Practice Guidelines of the treatment of eating disorders for people with higher weight. The Development Group followed the 'Guidelines for Guidelines' process outlined by the National Health and Medical Research Council. The development group included people with clinical, academic expertise and/or lived experience. The guideline has undergone extensive peer review and consultation over an 18-month period involving reviews by key stakeholders, including experts and organisations (including Dietitians Australia) with clinical, academic and/or lived experience.

Results: Twenty-one clinical recommendations were made and graded according to the National Health and Medical Research Council evidence grades. Clinical considerations such as weight stigma and weighing are also discussed.

Conclusions: These guidelines fill an important gap for dietitians in their need to better understand and care for people experiencing eating disorders.

Contact Author: Angelique Ralph, angelique.ralph@nedc.com.au

ID: 50 | Perceptions and experiences of South Asian immigrants with type 2 diabetes: An Australian qualitative study

Priya Rawat¹, Purva Gulyani¹, Ching Shan Wan², Yusra Elmi¹, Ashley Ng³

¹Diet Yumm, ²Australian Catholic University, ³La Trobe University

Background: South Asian immigrants have a higher prevalence of type 2 diabetes (T2D) than Australian-born individuals. They require culturally appropriate care for empowering T2D self-management. However, little is known about the lived experience of South Asian immigrants with T2D in Australia to provide insight into areas for improving culturally appropriate care.

Aim: To explore the perceptions and experiences of South Asian immigrants in Australia living with T2D.

Methods: Eighteen South Asian immigrant adults with T2D were recruited from primary care clinics and social

media to participate in semi-structured audio-recorded interviews. Participants were asked about their knowledge, dietary beliefs, and strategies to live with and manage T2D, and how they coped with T2D management during the COVID pandemic. Thematic analysis was used to analyse interview transcripts to identify categories and themes.

Results: The median age of participants was 45 years and the majority were men (72%). All participants used oral diabetes medications with two requiring insulin. Seven themes were identified including: (1) Inability to recognise culturally appropriate unrefined carbohydrates replacement to manage T2D; (2) skipping meals and exercise after high carbohydrate meals as management strategies (3) openness to try complementary medicines; (4) reliance on health professionals and online platforms as knowledge sources; (5) ambivalent views on medication use; (6) social stigma surrounding T2D impacting access to social support; and (7) COVID pandemic having no influence on T2D self-management.

Conclusions: The findings imply the need for culturally appropriate dietary education and increasing dietitian knowledge based on complementary and alternative medicine to provide evidenced-based advice.

Contact Author: Priya Rawat, priya69.pr@gmail.com

ID: 92 | An analysis of the transformative potential of Australia's existing food systems policy activities

Patricia Ribeiro de Melo¹, Phillip Baker¹, Priscila Machado¹, Elly Howse², Mark Lawrence¹

¹Deakin University, ²The Australian Prevention Partnership Centre

Background: Despite the worldwide momentum for actioning the food systems 'transformation agenda', the scope and ambition of existing public policies are inadequate to address these challenges. The causes of and the solutions to food systems-related problems can be contentious and characterised by conflicting views towards the nature and the degree of the changes that are needed to solve policy issues. Building upon this, three levels of approaches for tackling food systems-related problems have been identified and distinguished in first-order change (adjust), second-order change (reform), and third-order change (transform).

Aim: To identify key federal policy activities led by relevant Australian government departments that could impact food systems and classify them according to the order of change they represent.

Methods: A cross-department mapping was conducted to identify core food systems-related policy activities. Policies were classified against the order of change schema and assessed based on their transformative potential.

Results: Thirty policies were identified, with sixteen of them being classified as first-order change, followed by twelve second-order change policies, and with only two being classified as third-order change. While the health department was responsible for implementing the majority of first-order change types of policies (e.g., information campaigns and food reformulation) policies with the most transformative potential (e.g., sustainable agriculture) were being mostly led by non-health departments.

Conclusions: Non-health-related departments have demonstrated greater scope for second and third-order changes types of policies. Meaningful transformations to the Australian food system require a coordinated whole-of-government approach that combines the three levels of orders of change in policies.

Contact Author: Patricia Ribeiro de Melo, pribeirodemelo@deakin.edu.au

ID: 166 | What can dietitians do to help behaviour change in adults with T2DM?

Roshan Rigby¹, Lana Mitchell¹, Kyra Hamilton¹, Lauren Ball¹, Lauren Williams¹

¹Griffith University

Background: Type 2 diabetes is highly prevalent due, in part, to lifestyle behaviours including unhealthy dietary intake. Dietitians can support individuals in changing dietary behaviours by employing strategies from behavioural science and health psychology in consultations.

Aim: To explore the dietary behaviour change techniques self-reported by participants and the techniques they perceived their dietitian to enact within consultations using an evidence-based taxonomy.

Methods: An interpretive paradigm guided the research. Semi-structured telephone interviews were conducted in a national sample of Australian residents who had seen a dietitian within a month after their type 2 diabetes diagnosis. The interviews enabled participants to share the influences of dietary changes, including whether the strategies were helpful or not. Transcripts were coded using Michie and colleagues' Behaviour Change Technique Taxonomy (v1) and analysed according to the 16 groups of the taxonomy using thematic analysis.

Results: Participants ($n = 21$: 12 females, 9 males, aged 36–75 years) experienced type 2 diabetes and associated dietary changes variably. All participants reported making changes their diet using techniques relating to 11/16 groups such as ‘goals and planning’, ‘feedback and monitoring’, ‘social support’, and ‘repetition and substitution’. The participants perceived that their dietitians used 10/16 groups of techniques including ‘shaping knowledge’, aligning with nutrition education and advice. Techniques relating to self-identity and environmental restructuring were not commonly reported.

Conclusions: This study broadened the understanding of how individuals perceive advice from dietitians and the areas where dietitians are focusing behaviour change efforts and where further dietetic support may be needed.

Contact Author: Roshan Rigby, r.rigby@griffith.edu.au

ID: 251 | An evidence-based guide for identifying and managing malnutrition and frailty in the community setting

Shelley Roberts¹, Megan Rattray²

¹Griffith University and Gold Coast Health, ²Griffith University

Background: Malnutrition and frailty are under-recognised and under-treated in community settings and have devastating impacts on patients and their families. With ageing populations, the burden of these conditions in Australia and New Zealand (ANZ) is expected to increase.

Aim: To develop guidance for the identification and management of malnutrition and frailty in the community, for use by health professionals of all disciplines, specific to ANZ.

Methods: A comprehensive literature review, survey of ANZ dietitians and interviews with dietitians and other stakeholders underpinned the guide's development. Over a year, guide content was developed and revised by the project team and a multidisciplinary expert panel (including dietitians, geriatricians, exercise scientist, nurse, pharmacist and consumer representatives).

Results: The guide was recently launched (March 2022) and includes guidance on: (1) identifying malnutrition and frailty in the community (steps include: screening, referral, and assessment/diagnosis); and (2) the nutritional management of these conditions (steps: setting goals/selecting outcome measures, selecting/implementing nutrition interventions, and evaluating/monitoring outcomes). Detailed guidance for each step will be presented at the conference. The guide also includes general information on malnutrition and frailty, provides an overview of

screening tools validated in the community, and highlights the roles various members of the multidisciplinary team can play in identifying and supporting the nutritional management of these conditions. Emphasis is placed on patient- and family-centred care.

Conclusions: This guide provides ANZ community-based health professionals with recommendations for identifying and managing malnutrition and frailty in their settings. Wide dissemination and facilitated implementation projects will assist with its uptake.

Contact Author: Shelley Roberts, s.roberts@griffith.edu.au

ID: 210 | First stakeholder consensus statement for food allergen management

Ingrid Roche¹, Sandra Vale², Catherine Hornung³, Merryn Netting⁴, Alice Lee⁵, Penny Jorgensen⁶, Wendy Freeman⁷, Kirsten Perrett³, Sally Voukelatos⁷, Vicki McWilliam, Kirsten Grinter⁸, Maria Said⁷, Dianne Campbell⁹

¹Perth Childrens Hospital, ²National Allergy Strategy,

³Murdoch Children's Research Institute, ⁴SAHMRI,

⁵University of New South Wales Sydney, ⁶Allergy

New Zealand, ⁷Allergy & Anaphylaxis Australia, ⁸Allergen

Bureau, ⁹Children's Hospital at Westmead

Background: Consumers with food allergy often encounter inadequate, confusing, and ambiguous allergen information for packaged and unpackaged foods. Voluntary Precautionary Allergen Labelling (PAL) or ‘may contain’ statements are frequently used without appropriate risk assessment, resulting in confusion for consumers with food allergy. In addition, allergic reactions to packaged and unpackaged food, and food from food service providers, are common.

Aim: To develop a unified approach to improving food allergen management and providing clearer information for consumers with food allergy, through stakeholder engagement in Australia and New Zealand.

Methods: Two face-to-face forums and subsequent consultations were convened by key allergy organisations. These forums examined the evidence and facilitated discussions between consumers, food manufacturers, food retailers, legislators, regulatory bodies, researchers, and health professionals. An international comparison of approaches to regulation of food allergen labelling and PAL statements was also undertaken.

Results: Agreement on a consensus statement that outlined the responsibilities of consumers, food manufacturers and food service providers was reached by the stakeholders.

Conclusion: Development of this stakeholder consensus statement provides a platform to advocate for regulatory reform for allergen management within the food industry and improved food safety for consumers with food allergy.

Contact Author: Ingrid Roche, Ingrid.Roche@health.wa.gov.au

ID: 28 | Communication of nutrition information by influencers on social media: A scoping review

Alice Rogers¹, Shelley Wilkinson¹, Olivia Downie², Helen Truby^{1,3}

¹The University of Queensland, ²Queensland Health,

³Monash University

Background: Despite numerous government campaigns to communicate evidence-based nutrition information, the Australian population remain chronic under-consumers of fruit and vegetables and over-consumers of ultra-processed foods. Unlike governments, social media influencers appear to develop a high level of trust with their followers. Therefore, it is thought that nutrition information communicated by social media influencers is more likely to be popular with social media users. The techniques Influencers use to communicate nutrition information is yet to be examined.

Aim: To determine how social media influencers communicate nutrition information and the factors that influence the popularity of messages.

Methods: Nine databases were searched from 2016 to 2021. After identifying relevant sources, the 'Results' sections of the academic literature and entire texts of the grey literature and were coded. Using Microsoft Word, each key feature of the relevant text was highlighted, and the relevant code was recorded. Codes were created based on the text itself. These codes were then sorted iteratively into relevant themes and subthemes.

Results: Five themes were identified from the eleven studies included. These were, (1) Promoting Dietary Change, (2) Certain Modes/Styles of Content Delivery, (3) An Attractive Individual, (4) Language Features and (5) Appearing Connected to the Audience.

Future Directions: Social media influencers utilise specific techniques to ensure their nutrition messages are popular with social media users. These methods could inform strategies to build trust in government messages about food and nutrition. It may also be possible to utilise following of existing profiles to deliver evidenced based nutrition information to audiences.

Contact Author: Alice Rogers, alice.rogers@optusnet.com.au

ID: 62 | Co-designing an online nutrition education program for people with multiple sclerosis

Rebecca Russell¹, Lucinda Black¹, Andrea Begley¹

¹Curtin University

Background: People recently diagnosed with multiple sclerosis (MS) want MS-specific dietary advice to reduce the confusion around diet. To address their needs, we used co-design principles and collaborated with people with MS to develop an online nutrition education program.

Aim: To explore the acceptability and ease of comprehension of an online nutrition education program for people with MS.

Methods: The program modules were developed using findings from focus groups (six focus groups, total $n = 34$) and a survey ($n = 137$) of people with MS. The content was refined during two progressive workshops with six people with MS. Cognitive interviews were conducted with eight people with MS who had been diagnosed within the previous 5 years. Participants used a 'talk aloud' technique and responded to interviewer probing while working through module one of the six-week program. Audio-recordings were transcribed and analysed using deductive and inductive content analysis.

Results: Participants stated that, overall, the module was acceptable, and the content was easy to understand. Person-centred language and information about dietary changes that could potentially improve their symptoms, 'things we can do', were described as empowering and motivating. In contrast, scientific writing about evidence, too much text, and language that was not persuasive, were described as demotivating and disheartening, and the context of the content was misunderstood.

Conclusions: Positive language can increase the motivation to make desirable dietary changes and improve willingness to engage with nutrition resources. Nutritionists and dietitians could apply co-design principles when developing resources for people with MS, and use positive, empowering language.

Contact Author: Rebecca Russell, rebecca.d.robinson@postgrad.curtin.edu.au

ID: 20 | Being bold: Utilisation of a rapid re-feeding protocol in a voluntary in-patient eating disorders program

Fiona Salter¹, Urvashnee Singh, Deborah Kerr², Yun Zhao², Emily Jeffery²

¹Ramsay Healthcare, ²Curtin University

Background: Rapid re-feeding protocols are considered effective for weight restoration in adolescents with Anorexia Nervosa (AN); however, published research lacks detail on the re-feeding methods used. The use of rapid re-feeding protocols in adult AN populations and those with other eating disorder (ED) diagnoses has not been fully evaluated.

Aim: To describe the rapid re-feeding protocol and examine weight change in patients with EDs admitted to a voluntary inpatient ED program utilising the protocol.

Methods: The ED program dietitian determines the initial level of nutritional intake and prescribes ongoing nutritional support in accordance with a re-feeding protocol. For this prospective observational study, medical, demographic and anthropometric data were collected on admission and discharge for consenting older adolescents and adults admitted to the ED program between 1 April 2021 and 31 March 2022. Rate of weight gain was calculated: total weight gain/length of stay (LOS).

Results: Preliminary results of 54 patients with AN recruited to December 2021 [96% female, mean age 24.3 (SD 8.6, range 16–50) years, median BMI on admission 18.5 (IQR 3.3, range 13.4–29.6) kg/m², mean LOS 33.0 (SD 11.1, range 14–65) days]. Mean weight and BMI increased significantly [8.3 (SD 3.8) kg, $p < 0.001$; and 2.9 (SD 1.3) kg/m², $p < 0.001$, respectively]. The mean rate of weight gain was 1.75 (SD 0.6) kg/week.

Conclusion: The rapid re-feeding protocol was effective in achieving weight restoration in patients with AN admitted to this voluntary in-patient ED program. These results will contribute to informing optimal nutritional treatment for voluntary ED in-patient treatment settings.

Contact Author: Fiona Salter, fmsalter2010@gmail.com

ID: 42 | Exploring the social norms regarding parents' food provision in Australia using story completion methodology

Amelia Scott¹, Sarah Hunter², Brittany Johnson¹

¹Flinders University, ²Caring Futures Institute

Background: Children consume excess of unhealthy foods. Social context including social norms is one factor influencing parents' food provision. Little is known about the social norms existing in broader society that parents face when providing food to children.

Aim: To determine the social norms surrounding family food provision from the perspectives of Australian adults.

Methods: This qualitative study conducted online in 2021 used the emerging story completion methodology to gather hypothetical stories from Australian adults (≥ 18 years). Participants were presented with a story stem focusing on home food provision and instructed to write a story of what happens next. Stories (i.e., data) were coded and analysed using thematic analysis, to extract social norms.

Results: Five themes were identified from the data ($n = 75$); 1. Providing a healthy snack, 2. Providing justification for the provision of unhealthy convenience foods, 3. Increasing child autonomy in food provision, 4. Meal-times are a social occasion, and 5. Contextual factors influencing food provision and social norms. From these themes, we concluded two social norms around 1. Providing healthy foods and justifying non-adherence to healthy eating guidelines and 2. Evolution of family life and mealtime values.

Conclusion: This study provides emerging knowledge of Australian adult perspectives of social norms, specifically how parents should provide healthy foods and needing to justify non-adherence to healthy eating guidelines, as well as the norm that family life and mealtime values are evolving. It is crucial that dietitians utilise this knowledge of current social norms when developing interventions.

Contact Author: Amelia Scott, ameliascott12@gmail.com

ID: 245 | Vitamin requirements during stem cell transplantation: A systematic review

Bronwyn Segon¹, Sarah Andersen¹, Judy Bauer², Leroy Lam³, Hei Yan Chan⁴, D'Arcy Kenway, Teresa Brown²

¹Royal Brisbane and Women's Hospital, ²University of Queensland/DAA, ³Queensland Health, ⁴The University of Queensland

Background: Patients undergoing stem cell transplantation (SCT) frequently require nutrition support to prevent malnutrition developing during the acute post-transplantation period. There are no clinical guidelines on vitamin requirements or supplementation during SCT.

Aim: To collate and analyse the evidence for vitamin requirements following SCT.

Methods: The review protocol was registered on The International Prospective Register of Systematic Reviews. A systematic literature search of five databases was conducted to include studies published until March 2021. The review utilised the Preferred Reporting Items for

Systematic Reviews and Meta-analyses framework alongside the Grading of Recommendations Assessment, Development and Evaluation (GRADE) approach. Inclusion criteria consisted of adult patients undergoing SCT who received vitamin supplementation or had their vitamin levels monitored up to 100 days post-SCT. Main outcomes included vitamin deficiency and relevant clinical outcomes including acute graft-versus-host-disease, oral mucositis, and mortality.

Results: Eleven studies ($n = 11$) were eligible for inclusion. Eight studies monitored vitamins levels post-SCT, and seven studies provided vitamin supplementation. Three studies (supplementation observed in one) found a high prevalence of vitamin D deficiency (23%–60%) prior to SCT. Findings indicate an unclear association between vitamin deficiency and post-transplant complications including acute graft-versus-host-disease, oral mucositis, and mortality. The GRADE certainty of evidence across these was either low or very low.

Conclusion: It is unclear if vitamin supplementation is needed during SCT, though assessing vitamin D levels prior to transplant should be considered. Further large observational studies or randomised control trials are required.

Contact Author: Bronwyn Segon, bronwyn.segon@health.qld.gov.au

ID: 136 | A comparison of food security status among international and domestic students in Australian universities

Yumeng Shi¹, Margaret Allman-Farinelli¹

¹The University of Sydney

Background: Food insecurity has been a significant public health issue in tertiary education students. International students may have an elevated risk of food insecurity due to potentially more challenges in food availability and access than local students.

Aim: To assess the prevalence, determinants and impacts of food insecurity in university students in Australia and compare differences between international and domestic students.

Methods: A cross-sectional survey was conducted by using an 82-item online self-administered questionnaire. Non-dietetic university students aged from 18 to 30 years were recruited to participate. Food security status was measured by the 18-item Household Food Security Survey Module. A preliminary statistical analysis was performed in SPSS.

Results: To date 70 participants have completed the survey with 17% of domestic ($n = 53$) and 18% of international students ($n = 17$) demonstrating food insecurity. Adequate cooking facilities were positively associated with food security status in domestic students (OR = 21.50, 95% CI = 1.91, 241.54, $p = 0.001$). Mental health measured by the WHO-5 Well-Being Index was poorer in domestic students with more severe food insecurity. Food insecure domestic and international students tended to consume less fruits than their food secure peers.

Conclusions: This preliminary analysis showed almost one in five students in Australian universities experienced food insecurity whether domestic or international. Lack of cooking facilities contributed to food insecurity but the numbers of international participants will need to be expanded to confirm associations between other socio-demographic determinants and food insecurity. The impact on mental health needs further exploration.

Contact Author: Yumeng Shi, yshi7693@uni.sydney.edu.au

ID: 227 | Stakeholder views on existing and future video resources regarding infant feeding for Aboriginal families

Georgia Stewart¹, Karen Charlton¹

¹University of Wollongong

Background: Insufficient studies investigating breastfeeding and other infant feeding practices of Aboriginal babies have been undertaken. The disparity between Aboriginal and non-Aboriginal breastfeeding rates in Australia is stark. There are few online culturally appropriate resources available for Aboriginal families related to infant feeding. The online space presents an opportunity to explore and potentially capitalise on a more effective way to deliver breastfeeding messaging for Aboriginal mothers.

Aim: To (1) identify infant feeding experiences of Aboriginal women; (2) identify and evaluate perceptions relating to existing online breastfeeding resources; and (3) apply the findings to make recommendations for the development of new/novel resources for online use.

Methods: This qualitative study explored and examined experiences and stories from participants through semi-structured interviews. The Aboriginal researcher used a strengths-based approach and Yarning methodology. Interviews were recorded, transcribed and thematically coded.

Results: Eleven Aboriginal women participated. Three main themes emerged: strength in knowledge/knowledge is power, centering women in their power/the power of centering women, and strength in culture/power of connection and representation. The strength of culture, through stories from Aboriginal women about breastfeeding, and how that can positively reinforce their roles as women and mothers, was woven through the results.

Conclusions: More breastfeeding resources need to specifically target Aboriginal women. These need to encompass genuine Aboriginal experiences and stories, while providing information with a wider support system that reinforces women's health and wellbeing decisions. These resources should consider social determinants of health and go beyond a generalised, tokenistic Aboriginal 'look and feel' to empower women to connect to breastfeeding.

Contact Author: Georgia Stewart, gls995@uowmail.edu.au

ID: 235 | Muscle size, strength, and physical function in response to augmented calorie delivery: A TARGET sub-study

Matthew Summers¹, Lee-anne Chapple², Luke Weinel¹, Kylie Lange², Woo Han Yang, Adam Deane³, Marianne Chapman¹

¹Royal Adelaide Hospital, ²The University of Adelaide,

³Royal Melbourne Hospital

Background: Critical illness leads to muscle wasting which may be attenuated with augmented calorie delivery. The Augmented versus Routine approach to Giving Energy Trial (TARGET) randomised 4000 patients to receive energy-dense (1.5 kcal/ml) or standard (1.0 kcal/ml) enteral nutrition.

Aim: To evaluate whether augmented calorie delivery attenuates muscle loss and maintains strength when compared to routine care.

Methods: TARGET participants from a single participating ICU were eligible for enrolment in this sub-study if consent could be obtained. Ultrasound-derived muscle layer thickness (MLT) at three landmarks (quadriceps, forearm and mid-upper arm) and handgrip strength were measured at baseline and every 7 days until hospital discharge and at 3- and 6-months following randomisation. Data are presented as mean \pm standard deviation.

Results: Eighty patients (1.5 kcal: $n = 38$, 58 ± 14 years, 60% male, APACHE II 20 ± 7 vs. 1.0 kcal: $n = 42$, 54 ± 18 years, 66% male, APACHE II 22 ± 10) were recruited. Although patients in the 1.5 kcal group received more calories (2075 ± 344 vs. 1325 ± 313 kcal/

day; $p < 0.001$), there was no significant difference in quadriceps MLT at any timepoint, including ICU discharge (primary outcome) (1.5 kcal: 2.90 ± 1.27 vs. 1.0 kcal: 2.39 ± 1.06 cm; $p = 0.141$), hospital discharge (2.47 ± 1.03 vs. 2.10 ± 1.08 cm; $p = 0.227$) or at 3- and 6-months. Similar relationships were seen for forearm and mid-upper arm MLT and handgrip strength at all timepoints.

Conclusion: Augmented calorie delivery compared to routine care did not attenuate loss of muscle size or strength during hospital admission or at 3- and 6-months following randomisation.

Contact Author: Matthew Summers, matthew.summers@sa.gov.au

ID: 25 | Compliance and perception of older adults to nut butter supplementation in two research settings

Sze-Yen Tan¹, Robin M Daly¹, Boon Lung Ng², Joseph Wai², Rachel Brown³, Barbara R Cardoso⁴, Elena George¹, Monica Caixinha¹, Ninoshka DSouza¹, Teddy Ang¹

¹Deakin University, ²Barwon Health, ³University of Otago, ⁴Monash University

Background: Nut consumption has been associated with a reduction in risk for chronic diseases in older adults, including malnutrition and other physical and mental impairments. Nuts are nutrient-dense and can be used to supplement older adults' diet, but texture modification into nut butter is needed to overcome dentition challenges. Nut butter also has greater nutrient availability than whole nuts.

Aim: To investigate the feasibility of nut butter supplementation in older adults living in an aged-care facility (Study 1, ACTRN12619000698178) and the community (Study 2, ACTRN12621000699864).

Methods: Two 12-week randomised, controlled feasibility studies including aged-care residents (Study 1) and healthy free-living older adults (Study 2) were conducted. In both studies, participants were randomised to receive 30 g/d nut butter (NB) or usual care (Control). Participants' compliance, and perceived ease and liking of the NB (100 mm visual analogue scales) were assessed.

Results: Nineteen residents (NB $n = 10$; controls $n = 9$) aged 82 ± 11 years completed study 1. Compliance to NB was low [mean \pm SD, $39\% \pm 37\%$ (range 2%–99%)], and ease of consumption was rated as moderate [56 ± 28 (range 10–100)]. Study 2 included 30 healthy older adults (NB $n = 15$, controls $n = 15$) aged 68 ± 6 years

and observed higher NB compliance [$n = 13$ completed to-date, $93\% \pm 11\%$ (range 67%–100%)] and ease of consumption [68 ± 29 (range 8–100)].

Conclusions: Free-living older adults were more compliant and acceptant of nut butter supplementation compared to those in aged-care facilities. Specific strategies are needed to incorporate NB as part of the diet of aged-care facilities to enhance compliance and acceptance.

Contact Author: Sze-Yen Tan, [szyen.tan@deakin.edu.au](mailto:szeyen.tan@deakin.edu.au)

ID: 181 | Nurturing interprofessional collaboration: Views of oral health practitioners on nutrition care and dietetic intervention referrals

April Tottingham¹, Catherine Knight-Agarwal¹, Michelle Minehan¹

¹The University of Canberra

Background: Dietetic intervention should be supported by all areas of health care to reduce the prevalence of non-communicable diseases. Oral health professionals such as dentists and oral health therapists have extensive opportunities to identify high risk individuals for several non-communicable diseases and nurture dietetic engagement through their day-to-day practice. Current relevant literature is predominantly cross-sectional survey studies with self-reported data and does not explore the perspectives of oral health professionals in relation to nutrition advice and appropriate dietetic engagement.

Aim: To explore Australian oral health professionals' knowledge of nutritional and dietary advice and their perspectives regarding their role in referrals for dietary advice.

Methods: A qualitative study using semi-structured interviews, verbatim transcription, and interpretative phenomenological analysis. Participants represented three different health districts and were recruited via purposive sampling and snowball recruitment. Triangulation and member checking were used to improve trustworthiness.

Results: Analysis of interviews ($n = 6$) generated four main themes: oral health professionals' knowledge of relevant diet & disease relationships, oral health professionals' perspectives on giving dietary advice, oral health professionals' perspectives on giving dietetic referrals and relevant barriers and the participants suggestion for improved practice.

Conclusions: Oral health professionals in Australia have the training to identify diet-related diseases but need support in delivering nutrition advice to patients and developing clear, accessible pathways of referral to dietitians.

Additional research is needed to identify possible gaps in oral health professionals' training related to communication of diet related disease relationships to patients and to establish an effective dietetic referral pathway.

Contact Author: April Tottingham, maytottingham@gmail.com

ID: 125 | Hospital-wide mealtime audits: Extending malnutrition audits to identify opportunities to improve patient intake

Elise Treleaven¹, Adrienne Young², Dwayne Garcia¹, Alexandra Di Bella¹, Rebecca Cottrell, Joanne Hiatt¹, Alison Mudge¹, Merrilyn Banks¹

¹Royal Brisbane and Women's Hospital, ²The University of Queensland

Background: Local and international data demonstrates that 30%–50% of inpatients eat poorly, despite implementation of routine malnutrition screening, increasing use of dietitian assistants and revision of menu standards. Patients commonly report barriers related to mealtime care and environment.

Aim: To understand mealtime care practices and environment issues in a major metropolitan teaching hospital to understand opportunities for improvement.

Methods: The audits were completed by a Dietitian (or Assistant) over a two-month period in 2021. A structured audit tool was used at one breakfast, lunch and dinner on each ward to capture individual patient meal and ward observations. Data were analysed descriptively (% , count).

Results: A total of 892 observations were completed across 16 inpatient wards. Set-up assistance was required by 27% of patients (opening packages or being in a comfortable position to eat) and feeding assistance by 6%; timely assistance (within 10 minutes) was provided to 69% of patients. Half of patients were lying in bed at meal delivery; only 21% were sitting in a chair. There were marked differences across wards and mealtimes, with breakfast being the poorest.

Conclusions: This study demonstrates high levels of feeding dependency and poor mealtime positioning, highlighting the need for dietitians to lead a collaborative approach alongside the wider multi-disciplinary team to improve mealtime care. Differences between wards and mealtimes suggests that improvements need to be tailored to the specific barriers and enablers at the ward level, to support improved mealtime practices and optimise nutritional intake.

Contact Author: Elise Treleaven, elise.treleaven@health.qld.gov.au

ID: 10 | A co-design practice model for an Aboriginal wellbeing program: Development, implementation and applications in dietetics

Lisa Urquhart¹, Karin Fisher¹, Karen Roberts¹, **Leanne Brown¹**, Clinton Gibbs¹, Kerith Duncanson¹

¹University of Newcastle

Background: Co-design is a best practice principle for research and healthcare with Aboriginal people. There is limited evidence about the application of co-design practice by dietitians working with Aboriginal wellbeing programs.

Aim: To describe the development, implementation, and potential applications of a co-design practice model in an Aboriginal wellbeing program with implications for dietetic practice.

Methods: A team of two Aboriginal and four non-Aboriginal researchers (three dietitians) used qualitative research methods to analyse 90 published articles, 12 yarning transcripts and 26 reflective journal text sets that focused on Aboriginal wellbeing programs. We used collaborative yarning to analyse the data, to explore researcher experiences and reflections, and to refine our interpretations in relation to implementation and potential application of co-design in Aboriginal wellbeing programs.

Results: The Duguula Gayirray (yarning together), Yandaarray (walking together) and Duguula Nguraljili (sharing together) co-design practice model was developed in the context of an Aboriginal wellbeing program. The model design is open and asymmetrical to symbolise that co-design practice is dynamic and, potential application may vary across communities. A current research project with the Aboriginal wellbeing program engages the co-design practice model, supported by strong relationships between community, co-researchers and dietitians.

Conclusions: Yarning, walking, and sharing together are critical to co-design practice, grounded in respectful relationships between community and members of the dietetics profession. This model can guide Aboriginal communities and dietitians to extend co-design practice, and emerge with opportunities for power-sharing, equitable partnerships, and collaborative knowledges through deeply valuing Aboriginal ways of knowing, being or working.

Contact Author: Lisa Urquhart, lisa.urquhart@newcastle.edu.au

ID: 209 | Allergy 250 K – A project to support teens and young adults with severe food allergy

Sandra Vale¹, Maria Said², Nyssa Booth¹, Preeti Joshi, Ingrid Roche³, Heather Roberts¹, Merryn Netting⁴

¹National Allergy Strategy, ²Allergy & Anaphylaxis Australia, ³Perth Children's Hospital, ⁴SAHMRI

Background: In Australia, it is estimated that 250 000 teens and young adults live with severe allergies, particularly food allergies. Teens and young adults are at increased risk of fatal anaphylaxis.

Aim: To support and connect teens and young adults living with severe food allergy.

Methods: Teens and young adults were engaged and supported through a range of strategies including a peer mentor program, video chats, social media, and camps/fun days.

Results: Young adults were identified and trained as peer mentors to enable them to contribute to the video chats and camps. Discussions during the video chats provided insight into required resources and topics of interest for the website and/or social media posts. Camps were conducted to connect teens, peer mentors and volunteer health professionals through fun activities and allergy education. Two camps (NSW and Victoria) and a fun day (WA) were conducted engaging school aged teens living in that state. Dietitians played a vital role in liaising with camp catering, planning menus, confirming suitable products and working alongside catering staff during the camp.

Conclusions: The Allergy 250 K project successfully engaged teens and young adults through a number of initiatives including camps. Health professional volunteers at the camps gained valuable insights into what it is like for teens and young adults to live with severe food allergy, helping to inform their clinical practice. Conducting the camps also provided insight into what resources and support camps need along with providing an opportunity to share information and further educate, particularly with camp caterers.

Contact Author: Sandra Vale, sandra@allergy.org.au

ID: 214 | Best practice guidelines for anaphylaxis prevention and management in schools and children's education and care

Sandra Vale¹

¹National Allergy Strategy

Background: In 2018, a review of state and territory anaphylaxis management guidelines for schools identified differences in key recommendations and requirements for staff training, general use adrenaline autoinjectors and incident reporting. In the same year, a national survey conducted on long day care also indicated variation in anaphylaxis management strategies.

Aim: To engage with key stakeholders in schools and children's education and care (CEC) services to develop national best practice guidelines for anaphylaxis prevention and management.

Methods: Three phases of consultation were undertaken between February 2020 and October 2021: (1) a face-to-face meeting with key stakeholder organisations; (2) national online surveys of parents and school/CEC staff; (3) further email and virtual meeting engagement with key stakeholders. Draft best practice guidelines were developed and circulated and revised based on feedback received.

Results: Best Practice Guidelines for Anaphylaxis Prevention and Management were developed for both the school and CEC sectors. Supporting resources including example documents and templates were also developed. A NAS Allergy Aware website was developed as a resource hub for schools and CEC where these resources, along with other evidence-based best-practice resources could be accessed. Prior to the development of this website, in some states and territories, schools and CEC services had no access to sample templates or documents.

Conclusion: The Best Practice Guidelines provide an opportunity for national consistency towards anaphylaxis training and management in the school and CEC sectors.

Contact Author: Sandra Vale, sandra@allergy.org.au

ID: 65 | Opportunities for improving aboriginal and/or Torres Strait Islander representation in nutrition and dietetics

Helen Vidgen¹, Deanne Minniecon², Amanda Wingett^{3,4}, Nina Birtles¹, Husnaa Khan

¹Queensland University of Technology, ²Diabetes Australia, ³Aboriginal and Torres Strait Islander Health Team, ⁴ANU

Background: Dietitians Australia is privileged to be on the lands of the oldest continuous culture in the world and our nations' first nutritionists. Nationally, 3.3% of the Australian population identify as Aboriginal and/or Torres Strait Islander. Aboriginal and Torres Strait Islander people, however, make up only 0.9% of the overall allied health profession workforce. While Aboriginal

and/or Torres Strait Islander Peoples are significantly underrepresented in all allied health professions, the dietetic discipline is among the lowest in the sector with 0.2% of dietitians currently identifying as Indigenous. Clearly there are many benefits to increasing Aboriginal and/or Torres Strait Islander representation in the nutrition and dietetic profession. These range from benefits of diversity in general, to improving the profession's capacity and capability to meet the health needs of Aboriginal and/or Torres Strait Islander Peoples. Perhaps most significantly, there is an unrealised critical contribution to our profession's understanding of food, food systems, land and health.

Aim: To review the existing peer review literature regarding barriers and enablers to increasing representation building on what has been learnt from other health professions in Australia, review existing government and peak body policies and plans, prioritising those developed by or with Aboriginal and/or Torres Strait Islander people, that could guide activity to increase representation, identify existing opportunities and initiatives, for example, Commonwealth Supported Places, that could be used by dietitians to increase representation, and to describe what more could be done and mechanisms for action.

Contact Author: Helen Vidgen, h.vidgen@qut.edu.au

ID: 31 | Embracing remote access options as departmental practice for maintaining and optimising dietetics services

Angela Vivanti¹, Eryn Murray¹, Ra'eesa Doola¹, Jan Hill¹

¹Princess Alexandra Hospital, University of Queensland

Background: COVID-related workforce disruptions present unprecedented challenges to tertiary dietetic services delivery. With Queensland state borders opening, there was an anticipated surge in transmission. During the peak of statewide daily case numbers, around 25% were within Metro South Health Services.

Aim: Following prior implementation of remote access to electronic health records, applications and cloud-based team collaboration software, we evaluated the impact of COVID-related leave and the hours worked remotely in lieu of COVID-related leave.

Methods: Data were collected for one calendar month (November 2021; 21 workdays and January 2022; 19 workdays) pre-post Queensland border reopening (13 December 2021) across 26.9 full-time equivalent staff (dietitians, dietetic assistants, administrative officers). Total departmental COVID-19 related leave (testing,

close contacts or illness) was tallied and converted to equivalent days worked by dividing by 7.6 h.

Results: Daily state-wide median (range) COVID-19 cases increased from 1 (0–5) to 11 600 (2266–23 630) between November 2021 and January 2022. Monthly COVID-related leave increased from 36 to 87 hours (4.7–11.4 days, 2.4 fold increase). Monthly hours worked remotely instead of COVID-related leave increased from 16 to 262 h (2.1–34.5 days, 16.4 fold increase), equivalent to maintaining 7 weeks of workforce productivity that would otherwise be lost. There were no reported adverse events throughout this practice change.

Conclusion: COVID-19 related leave was successfully minimised as pandemic case numbers approached peak levels. Remote access enabled recuperation of 7 weeks of staff time and ongoing safe provision of dietetic services. The contribution of remote access to departmental dietetic service capacity was confirmed.

Contact Author: Angela Vivanti, angela.vivanti@health.qld.gov.au

ID: 34 | Nutrition assessment when physically separated: Impact, importance and perceived performance confidence of new graduate dietitians

Angela Vivanti^{1,2}, Kelsey Rechenber³, Li Ren Shen³, Sue MacDonell⁴, Lyn Lloyd⁵

¹Princess Alexandra Hospital, ²University of Queensland, ³Queensland University of Technology, ⁴University of Auckland, ⁵Auckland City Hospital

Background: COVID-19 related physical distancing requirements creates challenges for performing the physical components of malnutrition assessments.

Aim: To assess reported enablers and barriers to nutrition-focused physical assessment for newer graduate dietitians (<2 years) when separated from patients.

Methods: An online survey was disseminated through Dietitians New Zealand & Dietitians Australia. Descriptive data concerning importance, confidence, support and barriers are presented as counts and percentages.

Results: Fewer respondents were confident conducting physical assessments when not in the same room (7%, 1/15) compared to in person (67%, 10/15). They indicated lower importance for conducting physical assessments when not in the same room (40%, 6/15) compared to in person (67%, 10/15). Factors that would enhance knowledge, confidence and ability included: protocols for distant assessment (80% 12/15); self-teaching materials (60% 9/15); webinars (60% 9/15); in-person training (54%, 8/15) and time to practice remote physical assessment

techniques (54%, 8/15). Management support (27%, 4/15) and university teaching (13%, 2/17) were selected least often. Issues limiting nutrition assessments when not in the same room included patients without video enabled connection (73%, 11/15) or equipment (27%, 4/15), difficulty undertaking physical assessments (47%, 7/15), patient/client reluctance (40%, 6/15). Lack of family support for patients, organisational funding policy for services (0/15, each), internet security (7%, 1/15), telephones access and liability (13%, 2/15 each) were of lower concern.

Conclusion: Confidence conducting virtual nutrition assessments is a vital emerging skill. Supporting dietitians, including new graduates, with protocols, upskilling and practice are important considerations for both professional workplaces and training programmes.

Contact Author: Angela Vivanti, angela.vivanti@health.qld.gov.au

ID: 47 | Do low-carb diets assist in managing chronic diseases? An umbrella review and meta-analysis of control trial studies

Melanie Walters¹, Nasim Salehi¹, Berzenn Urbi¹

¹Sante Medical

Background: There is an increasing interest in low-carbohydrate diets (LCD) for the treatment of various chronic conditions. The body of research is growing regarding LCD as an alternative treatment for specific chronic conditions. We have undertaken an umbrella review to examine all the available systematic review evidence for LCD on improving chronic diseases and effects on metabolic risk factors.

Aim: To examine the available evidence on the impact of LCD on various markers of health in chronic conditions including; glycaemic control, BMI, waist circumference, HbA1c, HDL, LDL, total cholesterol, triglycerides, ALT, GGT, and blood pressure.

Methods: The literature search was conducted across four databases; Pubmed, CINAHL, Cochrane, and Scopus. Systematic reviews of randomised controlled trials (RCTs) were eligible if they included a LCD intervention for either treatment or prevention of chronic diseases and/or improvement in metabolic risk factors.

Results: The preliminary thematic analyses of this ongoing umbrella review has indicated LCD as a potential therapy in the management of type 2 diabetes, obesity, cardiovascular issues, epilepsy, fatty liver disease, blood lipids, and metabolic risk factors. In addition, it assists with exercise performance and general health outcomes.

Conclusions: To the best of our knowledge, this is the first review of the existing evidence for the use of LCD across a diverse range of health outcomes. This umbrella review will form a valuable part of the evidence that exists regarding the treatment of various lifestyle conditions using LCD.

Contact Author: Melanie Walters, dietitian@santemedical.com.au

ID: 40 | Dietary management of type 2 diabetes among South Asian immigrants in Australia: A mixed-methods study

Ching Shan Wan¹, Purva Gulyani², Priya Rawat², Yusra Elmi², Ashley Ng³

¹Australian Catholic University, ²Diet Yumm, ³La Trobe University

Background: South Asian immigrants have a five-fold higher risk of developing type 2 diabetes (T2D) compared to the Australian-born population. Little is known about current dietary patterns and perceptions of dietary modification, a primary strategy for T2D management, among South Asian immigrants with T2D in Australia.

Aim: To compare the dietary patterns of South Asian immigrants with T2D in Australia with national dietary recommendations and explore the barriers and facilitators to dietary management in this population.

Methods: A mixed-methods study comprising of three-day 24-hour dietary recalls and semi-structured interviews was used to investigate dietary patterns and barriers and facilitators to T2D self-management, respectively. Self-identified South Asian immigrant adults with T2D were recruited across primary care clinics and social media in Victoria, Australia.

Results: Among 18 participants recruited, 14, 16, and 17 participants had grain, fruit and dairy intake lower than daily recommendations (six serves of grain, two serves of fruit, and 2.5 serves of dairy), respectively. It cohered with qualitative findings that participants often referred T2D dietary management to reduce carbohydrate intake. Participants reported difficulties incorporating T2D self-management into their daily lives and a lack of knowledge about organisational support as barriers. Reported facilitators included proficiency in food label reading and blood glucose self-monitoring skills. Participants who were not using blood glucose monitoring devices had high fasting plasma glucose concentrations from blood tests.

Conclusion: Additional culturally appropriate dietary support is needed to improve T2D self-management of

South Asian immigrants by addressing their barriers to self-management.

Contact Author: Ching Shan Wan, chingshan.wan@acu.edu.au

ID: 48 | Barriers to implementing nutrition-related pressure injury prevention and management guidelines: A mixed-methods systematic review

Ching Shan Wan¹, Heilok Cheng¹, Mika Musgrave-Takeda¹, Mark Liu¹, Georgia Tobiano¹, Jake McMahon¹, Elizabeth McInnes¹

¹Australian Catholic University

Background: Low uptake of evidence-based pressure injury prevention and management (PIPM) guideline recommendations for nutrition screening, assessment, and interventions for improving nutrition status and promoting wound healing lead to compromised patient outcomes. Understanding barriers to implementing PIPM guidelines are the first step in developing an intervention to improve guideline uptake.

Aim: To synthesise quantitative, qualitative and mixed-methods studies on hospital clinicians' and patients' views on barriers to implementing nutrition-related PIPM guidelines.

Methods: A convergent integrated mixed-methods systematic review based on the Joanna Briggs Institute approach was conducted. English language peer-reviewed studies published from 2009 to May 2021 were identified from Medline, EMBASE, CINAHL, PsycINFO and Cochrane Central Library. Eligible studies were any that reported hospital clinicians' and patients' perceptions or experiences of current PIPM practices in acute and subacute settings. The Mixed Methods Appraisal Tool was used for critical appraisal. Quantitative data were transformed, then thematically analysed with the qualitative data.

Results: Fifty out of 14 488 studies met the inclusion criteria. Most were at low risk of bias. Fragmented interprofessional communication, lack of knowledge of nutrition-related PIPM, and not recognising the significance of using nutritional screening tools were clinicians' barriers to implementing nutrition guidelines. Patients' unawareness of the role of nutrition in PIPM and ambivalent views on the values of dietetic advice were barriers to patient participation in implementing nutrition guidelines.

Conclusion: The barriers identified will provide insights into developing targeted implementation interventions to improve nutrition-related PIPM guidelines uptake.

Contact Author: Ching Shan Wan, chingshan.wan@acu.edu.au

ID: 249 | Within-person variability of eating occasion timing in young adults

Leanne Wang¹, Anna Rangan¹, Margaret Allman-Farinelli¹, Virginia Chan¹

¹The University of Sydney

Background: Studies have shown that young adults follow less structured eating patterns compared with older cohorts. This may have implications for dietary assessment methods which rely on memory and structured meal patterns.

Aim: To describe the within-person variation of eating times in a sample of young adults aged 18–30 years.

Methods: Participants ($n = 42$) wore an Autographer camera that took first-person perspective images every 30 s for three consecutive days. All images were reviewed for the presence or absence of food and the timestamp was used to determine the commencement of an eating occasion. The times of food intake for each participant were plotted across 3 days and analysed for number of eating occasions and eating window as well as within-person variability using several metrics including Composite Phase Deviation and coefficient of variation.

Results: The total number of eating occasions per day ranged from 1–9 (mean 4.7) and eating windows from 15 min–22 h 11 min (mean 9 h 50 min). Fifteen individuals had high variability ($>30\%$) for number of eating occasions (range 0%–78%, mean 28%) and 10 had high variability for eating window (range 2%–106%, mean 25%). 26 individuals had a high variability (Composite Phase Deviation >2 h) for first eating occasion (range 0.3–16.3, mean 2.9 h) and 13 had high variability for last eating occasion (range 0.2–5.8, mean 1.8 h).

Conclusions: In this sample of young adults, the lack of regularity in eating patterns should be considered when selecting a dietary assessment method for this group.

Contact Author: Leanne Wang, lwan4745@uni.sydney.edu.au

ID: 97 | Calculating the cost of foodservices in residential aged care; more complicated than food cost alone

Mikaela Wheeler¹, Karen Abbey¹, Sandra Capra¹

¹The University of Queensland

Background: The cost to provide residents with meals in residential aged care (RAC) has garnered considerable public and government attention in the past 3 years, with much debate focused on how much homes should be spending on their meals. What existing estimates fail to

consider however, is the complexity of the foodservice system and its associated costs, resulting in an underestimation of the true cost to provide residents with meals.

Aim: To design a costing tool that captures the true cost of foodservices in RAC.

Methods: A systems approach was used to inform the development of the Foodservice Costing Tool (FCT) which measures expenses across eight domains, including costs that are directly and indirectly associated with foodservices, such as care staff time. The tool was piloted and trialled in the Australian aged care setting and compared to currently available estimates.

Results: The FCT was able to capture the costs of a foodservice system, demonstrated by a level of consistency between the pilots and trials of the tool. Results were approximately 29% higher than previously reported figures. The results highlighted the limitations of currently reported estimates which failed to encompass the complexity of foodservices and recognise that costs extend beyond the confines of the kitchen.

Conclusions: Being able to accurately understand and estimate the costs of foodservices is vital to ensuring efficiency, cost effectiveness accountability in RAC. Future research will investigate the implementation of the FCT on a larger scale.

Contact Author: Mikaela Wheeler, mikaela.wheeler@uq.net.au

ID: 126 | Gut health, the microbiome and dietary choices: an exploration of dietitian and consumer perceptions

Georgina Williams¹, Eleanor Beck¹, Linda Tapsell¹

¹University of Wollongong

Background: ‘Gut health’ is a term increasingly used by media and food industry. Despite this, heterogenous research design and outcome measures mean specific definitions and recommendations regarding ‘gut health’ remain unclear.

Aim: To explore consumer and dietitian perceptions regarding ‘gut health’ and associated dietary influences, to identify requirements to inform translational research and tailor nutrition recommendations.

Methods: Online focus groups (consumers; adults with no formal medical or nutrition training) and interviews (practising dietitians) were conducted, with semi-structured open-ended questioning addressing study aims. Discussions were transcribed and inductive thematic analysis completed in duplicate.

Results: Fourteen focus groups ($n = 38$, 23 females) and 14 interviews (12 female) were conducted. Both

groups considered 'gut health' important however the specific role and health implications of the microbiome were incompletely described. Dietitians demonstrated a 'food-first' approach to gut health management, based on national dietary guidelines, whilst consumers primarily named fermented foods or probiotic supplements as beneficial to 'gut health'. Dietitians reported difficulties associated with gut health management due to the individual and multi-factorial nature of gut health and the perception that current evidence is not yet adequate for specific practice change.

Conclusions: There is a need for evidence-based dietary guidelines in this area focussing on both preventative and curative health. Current literature regarding diet and gut health does not differ from dietary guidelines however increased consumer interest in 'gut health' may offer an opportunistic re-framing of these recommendations in practice, to improve adherence and overall nutritional health.

Contact Author: Georgina Williams, gw659@uowmail.edu.au

ID: 207 | Assessing communication skills using telehealth: Perceptions and recommendations of dietetic educators

Hattie Wright¹, Marie-Claire O'Shea², Julia Sekula³, Lana Mitchell²

¹University of the Sunshine Coast, ²Griffith University,

³The University of Auckland

Background: A rapid increase in utilisation of telehealth following the COVID-19 pandemic pose unique opportunities and challenges in the healthcare education sector. Best practice guidelines on assessment of undergraduate health care student communication skills using telehealth are lacking.

Aim: To explore the perceptions of dietetic educators regarding assessment of dietetic student communication skills using telehealth and provide educators with recommendations to facilitate this assessment.

Methods: A qualitative descriptive study design with inductive analysis was used. Australian and New-Zealand dietetic educators ($n = 24$) were recruited with ($n = 10$) and without ($n = 14$) previous experience in assessing students in the telehealth setting. After watching a series of pre-recorded dietetic interviews conducted by student dietitians, utilising videoconferencing, educators answered open-ended questions on their ability to assess communication skills in the telehealth setting. Peer debriefing and triangulation during analysis increased research rigour.

Results: Five themes were identified: (i) non-verbal communication is more difficult to assess using telehealth, (ii) tailoring of verbal communication to the telehealth setting, (iii) establishment of an optimal telehealth environment, (iv) telehealth training and preparation is required, and (v) flexibility and adaptability of students and educators. An educator checklist was developed to facilitate the planning, preparation, and assessment of communication skills using telehealth.

Conclusion: Educators agreed it is important to include telehealth training in the dietetic curriculum to better prepare students for the future workforce. Guidelines and tools are needed to support dietetic educators to assess communication skills in the telehealth setting.

Contact Author: Hattie Wright, hwright@usc.edu.au

ID: 122 | Enablers and barriers to healthy eating among hospital nurses: A systematic review

Stephanie Wylie¹, Sarah Marko¹, Jennifer Utter¹

¹Bond University

Background: The health and wellbeing of nurses plays a significant role in the quality of care they provide and patient outcomes. Yet, available evidence suggests that, on average, nurses have poor dietary habits and high rates of chronic disease.

Aim: To identify enablers and barriers related to healthy eating among nurses in a hospital setting.

Methods: Five electronic databases (PubMed, CINAHL, Embase, Web of Science and ProQuest) were systematically searched in October 2021 for studies that were conducted in a hospital setting and reported on healthy eating behaviours of nurses exclusively. The Mixed Method Appraisal Tool was used to assess quality of studies and findings were descriptively summarised using the socio-ecological model.

Results: Nine qualitative, 18 quantitative and 3 mixed-method papers ($n = 8024$ nurses) were included in the review. At an environmental level, frequently reported barriers were high accessibility and availability of unhealthy foods, and lack of appropriate cooking and storage facilities. Organisational enablers were considered roster planning, which allowed for established routines around meals, and disciplined health programs, while barriers were shift work and high work demands. An interpersonal enabler was supportive social networks while barriers included the work and social culture of nursing units. Finally, intrapersonal barriers were stress, fatigue, self-efficacy and personal values, with the latter two also identified as enablers.

Conclusions: Nurses report a range of barriers and enablers to healthy eating in the hospital work environment. Future research and worksite interventions may consider implementing and assessing multi-level strategies to improve eating behaviours of nurses.

Contact Author: Stephanie Wylie, stephwylie1@gmail.com

ID: 59 | Long term outcomes of a community of practice for dietitians working in Aboriginal health

Ellen Wynn, Robyn Delbridge, Claire Palermo¹, Annabelle Wilson²

¹Monash University, ²Flinders University

Background: Dietitians face significant challenges when working in Aboriginal health settings and need a new way of working with Aboriginal peoples that acknowledges the strengths of both dietitians and Aboriginal peoples. Critical reflection is an important part of this but can be challenging. Findings of a previous study suggest that Community of Practice focussed on critical reflection can improve confidence and practice of dietitians in Aboriginal health in the short-term.

Aim: To determine the long-term (>5 years) impact of a Community of Practice on dietitians who work in Aboriginal health.

Methods: Data were collected through in-depth interviews and a cultural awareness self-assessment tool. Multiple methods analysis was conducted including social network analysis, inductive thematic analysis and descriptive statistics.

Results: 11 dietitians participated. Three main areas of ongoing impact (>5 years) were identified including (1) development of social and professional networks (2) career progression and retention (3) fundamental change in thinking and ongoing practice.

Conclusions: Dietitians must be bold and hold conversations about how to work effectively in Aboriginal health. Community of Practice can support this by allowing dietitians' to critically reflect in a safe, supportive environment. This is a crucial element required to shift the focus from a deficit model where Aboriginal peoples are seen as a 'problem to fix' to a strengths-based approach where we reflect on dietetics as a profession and change the ways in which we work. In the long-term, participation in a Community of Practice can result in sustained changes in practice for dietitians who work in Aboriginal health.

Contact Author: Ellen Wynn, ellen_wynn@icloud.com

ID: 173 | Beyond refeeding syndrome: The effect of including dietitians in eating disorder treatment. A systematic review

Yive Yang¹, Janet Conti¹, Caitlin McMaster², Phillipa Hay¹

¹Western Sydney University, ²University of Sydney

Background: Eating disorders are potentially life-threatening mental health disorders that require management by a multidisciplinary team. However, little is known about the dietitian's unique role or effectiveness, despite best practice guidelines consistently recommending dietitians be included as part of the treatment team.

Aim: To systematically evaluate available literature to determine the effect of including a dietitian in outpatient eating disorder treatment, and to contribute to the understanding of a dietitian's role.

Methods: Six databases and Google Scholar were searched for articles that compared outcomes for individuals receiving specialist dietetic treatment with outcomes for those receiving any comparative treatment. Studies needed to be controlled trials where outcomes were measured by a validated instrument.

Results: The searches returned 16 327 articles, of which 11 articles reporting on 10 studies were included. Two studies found that dietetic intervention improved eating disorder psychopathology, and three found that it did not. Three studies reported that dietetic input improved other psychopathological markers, and three reported that it did not. One consistent finding was that dietetic input improved body mass index/weight and nutritional intake. A variety of instruments were used to measure outcomes, making direct comparisons between studies difficult. Furthermore, there was no consistent definition of the dietetic components included and most studies were published over 20 years ago and are now out of date.

Conclusions: Further research is needed to develop consistent dietetic guidelines and outcome measures; this would help to define the role of each member of the multidisciplinary team, and particularly the role of dietitians, in eating disorder treatment.

Contact Author: Yive Yang, 20446127@student.westernsydney.edu.au

ID: 224 | An audit of the knowledge translation strategies included in food- based dietary guidelines

Serene Yoong¹, Heidi Turon^{2,3}, Lyndal Bayles¹, Meghan Finch³, Courtney Barnes, Emma Doherty², Luke Wolfenden

¹Swinburne University of Technology, ²University of Newcastle, ³Hunter New England Population Health

Background: Country level food-based dietary guidelines (FBDGs) are developed to improve population dietary patterns, promote health and prevent chronic diseases. While it is recommended that knowledge translation (KT) strategies are planned and undertaken to ensure reach and impact of FBDGs, the extent in which this is done is largely unknown.

Aim: To describe: (i) the availability and type of strategies outlined in KT plans included within FBDGs, and (ii) the type of KT strategies used.

Methods: An audit of all FBDGs published on the Food and Agriculture Organization website were undertaken to identify guidelines published in English language to assess the availability of KT plans and KT strategies used. A KT plan was defined as a statement outlining the goals, audience, strategies, expertise and/or resources planned to increase reach of the FBDG. KT strategies were defined as materials focused primarily on communicating results by targeting and tailoring findings and messages to a specific audience.

Results: Fifty-seven FBDGs were identified. Thirteen (22.8%) had a detailed KT plan, 18 (31.6%) had limited information, and the remainder (26, 45.6%) did not describe any plan. Of the 13 with a detailed plan, all aimed to increase knowledge and awareness and six also intended to inform policy and behaviour change. Most (96.4%) FBDG used passive diffusion strategies, however those with a detailed KT plan also used active dissemination strategies, including information sessions and briefings with health professionals.

Conclusions: There is opportunity to increase reach and impact of FBDGs by ensuring the development and execution of KT plans and strategies.

Contact Author: Serene Yoong, syoong@swin.edu.au

ID: 135 | Exploring hospital mealtimes using creative qualitative methods

Adrienne Young^{1,2}, Angela Byrnes¹, Danielle Mahoney², Mark Brough², Gary Power¹, Margaret Cahill¹, Prue McRae¹, Alison Mudge¹, Evonne Miller³

¹Royal Brisbane and Women's Hospital, ²University of Queensland, ³Queensland University of Technology

Background: Hospital mealtimes represent a time of frequent frustration for staff and patients, and interventions to improve mealtimes have shown only modest outcomes.

Aim: To gather and understand the experience of hospital mealtimes from multiple perspectives (i.e., older inpatients, caregivers and staff), to inform the co-design of new interventions.

Methods: 'Go-along' mealtime observations were undertaken on acute care wards within a single metropolitan hospital in Brisbane in 2019. A researcher accompanied participants (10 patients 65+ years, 5 caregivers, 4 nurses, 2 foodservice staff) during a mealtime, documenting meaningful elements using photographs and field notes. Photo-elicitation interviews were then undertaken with participants (4 patients, 3 carers, 4 nurses, 2 foodservice staff) and other staff not directly involved in mealtime care (2 physiotherapists, 1 dietitian, 1 doctor, 1 healthcare assistant) to gain insight into their experience, prompted by the photographs. Data were analysed using inductive thematic analysis, involving researchers from diverse professional backgrounds including a consumer representative.

Results: Four themes were identified reflecting the tensions of mealtime 'roles' (teamwork, clinical vs. fundamental cares, the 'good' patient, independence), 'space' (fighting for space at the level of the tray, table, bed and ward), 'systems' (patient-centred nutrition care within a constrained system) and 'time' (planning for the meal, delivery rush hour, left alone to eat), which presented a barrier to creating 'meaningful mealtimes' (joy, sharing, sense of normality, promoting recovery).

Conclusions: This study uncovered tensions and touchpoints during hospital mealtimes through creative photo-voice methods which can be used to co-design new interventions.

Contact Author: Adrienne Young, adrienne.young@health.qld.gov.au

ID: 149 | Food choices after stroke: A qualitative exploration of the eating behaviours of stroke survivors

Karly Zacharia¹, Amanda Patterson¹, Meredith Burke², Coralie English¹, Rachael Peak², Raymond Gray², Lesley MacDonald-Wicks¹

¹University of Newcastle, ²Hunter Medical Research Institute

Background: Globally, 13.7 million people will have their first stroke this year, with 40% of stroke survivors going on to have another more disabling stroke. Second

stroke risk factors can be modified by lifestyle change including improving diet quality. What we do not know, is how the diet of stroke survivors has changed and whether stroke outcomes make dietary change challenging.

Aim: To explore the experience of stroke survivors and how this affects their food choices.

Methods: A qualitative descriptive study design was used. Individual, semi-structured interviews were conducted via videocall and transcribed verbatim. Participants ($n = 8$) were community dwelling, adult stroke survivors, >3-months post stroke. An open-ended interview guide was developed to explore experiences of food after stroke, piloted by stroke survivors to ensure accessibility. An independent qualitative data analyst reflexively, thematically analysed transcripts using the Braun & Clarke method.

Results: Five overarching themes highlighted that stroke can fundamentally change food choices and capabilities. Stroke survivors employ a range of strategies to make food planning and preparation easier: support services, different food types, simpler meals, convenience meals, physical aids. Stroke outcomes, especially fatigue and physical ability, make change challenging. Many utilise support services, but few engage dietetic support. All would like support specific to their needs to make dietary change easier.

Conclusions: We know that a change in diet can decrease risk of second stroke, but health benefits from diet change take time to accrue. Understanding factors affecting food choices is essential to developing sustainable diet programs to support change.

Contact Author: Karly Zacharia, karly.zacharia@uon.edu.au

ABSTRACT**Dietitians Australia 2022 – Poster Presentations****ID: 240 | Nutritional adequacy and patient perceptions of the inpatient haemodialysis menu: A mixed methods case series**Fatima Al Nakeeb¹, Kelly Lambert¹, Kathleen Neal¹¹University of Wollongong

Background: Patients receiving haemodialysis treatment are at increased risk of malnutrition. Research that quantifies the dietary intake and explores the perception of haemodialysis inpatients regarding intake is limited.

Aim: To evaluate the nutritional adequacy of the inpatient haemodialysis menu, quantify dietary intake of haemodialysis inpatients and explore patient perceptions of the haemodialysis menu.

Methods: A menu analysis was undertaken comparing the haemodialysis diet to menu reference values using a one sample t-test via SPSS. Eight participants were purposively sampled on the renal ward at Liverpool Hospital between April and June 2021. Semi-structured interviews were conducted to quantify the dietary intake of participants and their perceptions of the inpatient haemodialysis menu. Participants dietary intake was calculated using the hospital's electronic menu system and FoodWorks™ and compared to individual nutrient needs estimated using evidence-based guidelines. Simple thematic analysis was used to identify dominant themes.

Results: The standard inpatient haemodialysis menu did not provide adequate energy, fibre, sodium, potassium and vitamin C. Inadequate energy and protein intake was present in half of the study sample. Passive acceptance of the menu, environmental and individual barriers, and cultural considerations contributed to missed food opportunities. This in turn impacted the patient experience and resulted in inadequate intake.

Conclusions: The nutritional profile of the haemodialysis menu impacts the dietary intake and experience of haemodialysis inpatients. It is recommended that the inpatient haemodialysis menu is reviewed and optimised in line with evidence-based guidelines for patients receiving haemodialysis treatment. Further research exploring

patient perceptions of the haemodialysis diet is also recommended.

Contact Author: Fatima Al Nakeeb, fatimaalnakeeb@outlook.com

ID: 121 | Food Environment Interventions to Improve the Dietary Behaviour of Hospital Staff: A Systematic Literature ReviewKawther al-Tamimi¹, Jennifer Utter, Louise Van Herwerden¹, Malika Abdul¹Bond University

Background: The workplace food environment plays an important role in determining how and what employees eat. Numerous workplace interventions targeting diet and nutrition have been developed, however, the effectiveness of these interventions within the hospital work environment remains unknown. Exploring this is important, as healthcare workers have been identified to be at risk of poor nutrition due to the presence of unique industry factors, namely shift work and high job stress.

Aim: To determine the effectiveness of hospital-based interventions in improving eating patterns and/or food purchasing behaviour of hospital staff.

Methods: Four electronic databases (PubMed, EMBASE, CINAHL, WoS) were searched for intervention studies conducted within hospital retail food environments. Studies assessing outcomes pertaining to changes in eating patterns and/or food purchasing behaviour of hospital employees were included. Study quality was assessed using the Mixed Methods Appraisal Tool.

Results: Twenty studies were included in the review. Ten studies were moderate to low quality and almost half of studies (n=9) utilised a quantitative descriptive design. Intervention modes included signage and health labels (n=17), price modifications (n=9), recipe modifications (n=7), choice architecture (n=5) and altering healthy food availability (n=5) and cooking processes (n=1). Fifteen studies contained more than one intervention type within their design. Significant improvements in all primary outcomes was identified within eight studies, where all had included a point-of-purchase prompt.

Conclusions: Multicomponent interventions that incorporate point-of-purchase prompts may be useful in

improving eating patterns and/or food purchasing behaviour of hospital staff. Further research identifying the long-term effectiveness of these interventions on improving health outcomes is warranted.

Contact Author: Kawther al-Tamimi, kawther.altamimi@outlook.com

ID: 80 | Peripheral Parenteral Nutrition implementation at a major cancer centre: observational study of utilisation and complications

Anna Beaumont¹, Danika Carty¹, Belinda Steer¹, Erin Laing¹

¹Peter MacCullum Cancer Centre

Background: Guidelines recommend Peripheral Parenteral Nutrition (PPN) be used for short term nutrition support for gastrointestinal tract (GIT) failure, as a bridge to Total Parenteral Nutrition (TPN) or oral/enteral nutrition.

Aim: To describe the implementation and use of PPN at a major cancer centre.

Methods: A retrospective medical record audit of all patients receiving PPN from April - September 2021 was conducted, after PPN implementation in April 2021. Data was recorded on usage (PPN indication, duration, inadequate nutrition preceding PPN (days)), nutritional provision via PPN (percentage of energy/protein requirements), proportion of patients transitioned to TPN or oral/enteral nutrition following PPN, and complication rates. Descriptive statistics were used.

Results: Fifty-seven patients (60% male, median age 60 years), with varied cancer diagnosis (colorectal n=39, 68%; upper GI n=5, 9%; sarcoma n=5, 9%) received PPN during the audit period. Indications for PPN included ileus/obstruction (n=43, 75%) and central line access issues (n=6, 10%). Eighty-four percent commenced PPN.

Conclusion: PPN was utilised as per recommendations regarding indication, timing of commencement and duration. PPN complications occurred but all classified as mild severity. PPN is a feasible intervention that can support the short-term nutrition of cancer patients with a non-functioning GIT.

Contact Author: Anna Beaumont, anna.beaumont@petermac.org

ID: 95 | Telehealth expansion project to deliver dietetic services in an adult outpatient setting. Is it accepted?

Taleisha Bennier¹, Mia Matwiejczyk²

¹Queensland Health, ²Rockhampton Hospital

Background: Telehealth is an evidenced modality to deliver effective dietetic services.

Aim: To expand telehealth as an additional modality to deliver dietetics services for adult general and chronic disease outpatient clinics in a regional community setting impacted by intermittent facility closures.

Methods: A phased approach was taken in formal implementation and expansion of telehealth for dietetic outpatient clinics. In this initial 3-month phase, new patients were seen face-to-face and eligible patients offered review appointments via telehealth, telephone or face-to-face. A local screening tool was utilised to determine eligibility of patients. The uptake of telehealth was assessed by comparing occasions of service for telehealth, telephone and face-to-face consults.

Results: Seventy-seven review appointments were conducted across general and chronic disease outpatient clinics with a total 16.8% uptake of telehealth review appointments. The general outpatient clinic had 8 (25%) telehealth appointments and the chronic disease outpatient clinic had 5 (10.8%). Patients who utilised telehealth were those who did not have access to transport, patients with limited mobility, and those too unwell to attend appointments who would usually fail to attend.

Conclusions: Telehealth was able to be implemented efficiently for adult dietetic outpatient services during the pandemic. When patients were presented with varying modality options for review appointments, they mainly preferred face to face, or telephone, over telehealth. Where patients were not able to attend appointments face-to-face, telehealth was utilised successfully where selected. Ultimately, telehealth has increased access to this service and the expansion of telehealth will continue.

Contact Author: Taleisha Bennier, taleisha.bennier@health.qld.gov.au

ID: 6 | Maternal nutrition affects the composition of HMOs in human milk

Caren Biddulph¹, Judith Maher¹

¹University of the Sunshine Coast

Background: Breastfeeding remains the ideal way in which to nourish most infants. As such, the composition of human milk has long been the focus of considerable research, and more recently much attention has been paid to its various bioactive components such as human milk oligosaccharides (HMOs). Whilst there has been significant research into the physiological and immunological properties of certain HMOs, very

little is currently understood about the maternal factors that affect their composition and profiles in human milk.

Aim: To examine the effect of maternal nutrition factors (dietary intake and body composition) on the composition of HMOs in human milk collected during established lactation.

Methods: A range of valid assessment techniques explored the dietary intake and body composition of breastfeeding mothers. Data on demographics, physical activity, dietary intake, anthropometric measures and body composition (DEXA) will be correlated to HMO profiles as determined via advanced analytical techniques. This will be completed by mid-2022.

Results: As these factors are largely modifiable, it is anticipated that the outcomes of this research will provide information about maternal nutrition factors that can be optimised to enhance and preserve the composition of HMOs.

Contact Author: Caren Biddulph, carenbiddulph@gmail.com

ID: 98 | Feasibility and acceptability of the Supporting Nutrition and Optimising Wellbeing Program (SNOW-P) for Duchenne muscular dystrophy

Natassja Billich¹, Paula Bray¹, Helen Truby^{1,2}, Maureen Evans³, Kate Carroll^{1,3}, Katy de Valle, Justine Adams⁴, Rachel Kennedy, Daniella Villano, Andrew Kornberg, Eppie Yiu, Monique Ryan^{3,4}, Zoe Davidson¹

¹Monash University, ²University of Queensland, ³The Royal Children's Hospital, ⁴Murdoch Children's Research Institute

Background: Young people with Duchenne muscular dystrophy (DMD) are at increased risk of excessive weight gain. Nutrition and weight management are important to families; however, several barriers exist.

Aim: To investigate the feasibility and acceptability of a co-designed weight management program for DMD.

Methods: The Supporting Nutrition and Optimising Wellbeing Program (SNOW-P) was co-designed by clinicians and caregivers of individuals with DMD and involved diet and behaviour weight management strategies. Telehealth/phone visits were conducted weekly over 6 weeks. A single-arm intervention including young people with DMD and obesity (body mass index ≥ 97 th percentile) was conducted to evaluate the feasibility and acceptability of SNOW-P. Secondary outcomes included weight, physical function and quality of life.

Results: Eight participants were enrolled (median age 11.4 interquartile range [IQR] 8.3, 13.1) of which seven completed SNOW-P. Visit attendance was high (88%–100%). Participants ($n = 3$) and parents ($n = 5$) reported high satisfaction; the majority thought participating was easy and all would recommend the program. Weight z-scores remained stable at the 12 week follow up (median change -0.01 , IQR -0.23 , 0.17). Some secondary outcomes had low completion rates or were not feasible via telehealth.

Conclusions: A co-designed, telehealth weight management program is a feasible and acceptable approach to managing obesity in DMD. An adapted, hybrid telehealth and face-to-face program is recommended for efficacy testing; secondary outcomes need to be adjusted to meet this adapted mode of delivery.

Contact Author: Natassja Billich, natassja.k.billich@gmail.com

ID: 159 | Regulating human-identical milk oligosaccharides in infant formula products

Emma Breen¹

¹Food Standards Australia New Zealand

Background: As our knowledge of human milk expands, infant formula ingredients are developed to better replicate it. FSANZ assessed the oligosaccharides 2'-fucosyllactose and Lacto-N-neotetraose for addition to infant formula products.

Aim: To address the question, should oligosaccharides 2'-fucosyllactose and Lacto-N-neotetraose be permitted in infant formula products?

Methods: To assess the best available evidence to determine the safety and health effects in infants. Risk analysis was used to assess in vitro, in vivo, animal and human studies, and to consider relevant Ministerial Policy Guidelines.

Results: The oligosaccharides, produced with gene technology, were found to be chemically and structurally identical to those in human milk. As the microbiota of human milk varies between individuals, a maximum use level was established from a mid-range concentration found in mature human milk. No risk to public health and safety was identified. The evidence indicated the oligosaccharides promote a bifidogenic effect and limits infection by pathogenic strains of *Campylobacter jejuni* in infants.

Conclusions: Based on the level of evidence and intended purpose, 2'-fucosyllactose and Lacto-N-neotetraose were permitted in infant formula products at a maximum of 96 mg per 100 kJ which contains not more than 24 mg of lacto-N-neotetraose. Research continues to emerge on the health effects related to the consumption of human milk

oligosaccharides, and the complex and changeable microbiota, particularly in vulnerable populations such as infants.

Contact Author: Emma Breen, emma.breen@foodstandards.gov.au

ID: 197 | Dietary intake and symptom burden of adults commencing peritoneal dialysis

Georgie Broinowski, Michele Ryan¹, Maryann Nicdao¹, Katrina Chau¹, Kelly Lambert²

¹Western Sydney Local Health District, ²University of Wollongong

Background: Individuals with kidney failure who require peritoneal dialysis have an increased risk of malnutrition. This contributes to technique failure and poor quality of life. Studies describing the dietary intake in those commencing dialysis are scarce.

Aim: To describe and compare dietary intake in adults commencing peritoneal dialysis with evidence-based guidelines and investigate associations between dietary intake and symptom burden.

Methods: Participants were recruited from the largest dialysis training centre in Australia. Dietary intake was assessed by the site renal dietitian at the commencement of dialysis training. Assessment was assisted by participant's digital photos of meals and snacks eaten for at least 1 day. Dietary intake was analysed using Foodworks and compared to evidence-based guidelines for nutrition in kidney disease. Symptom burden was evaluated using the iPOS renal.

Results: Twenty-seven adults were recruited ($n = 9$ undertaking incremental, $n = 18$ on continuous or automated dialysis). Mean protein intake was 1.16 ± 0.47 g/kg and median energy intake 26.7 (interquartile range: 18.9–30.6) kcal/kg. This was not significantly different than evidence-based guidelines. There were no significant differences between dialysis types for any nutrient. Fibre intake was poor at 23.7 ± 10.0 g/day. Intake of grains, fruit and vegetables were also inadequate. There were no significant associations between symptom burden and dietary intake.

Conclusions: Despite concern about malnutrition, this population of adults commencing peritoneal dialysis commencing peritoneal dialysis were consuming adequate protein and energy. Intake of fibre, because of low fruit and vegetable intake warrants further investigation to determine if diet quality improves after dialysis commencement.

Contact Author: Georgie Broinowski, gmb427@uowmail.edu.au

ID: 144 | Nutritional status and implications of patients undergoing Chimeric Antigen Receptor T-Cell (CAR-T) therapy

Danika Carty¹, Anna Beaumont¹, Erin Laing¹, Jenelle Loeliger¹

¹Peter MacCallum Cancer Centre

Background: Chimeric Antigen Receptor T-cell (CAR-T) therapy is a novel treatment for haematological malignancies, but the nutritional implications of CAR-T therapy are relatively unknown.

Aim: To assess the nutritional status of patients before CAR-T treatment and observe post-treatment nutritional status, symptoms and dietetic interventions.

Methods: Eligible patients received proactive nutritional assessment and consultation prior to CAR-T therapy, as part of a wider study evaluating the feasibility of multimodal prehabilitation in this population (Nov 2020–Dec 2021). Pre-treatment, nutritional status and sarcopenia was assessed using patient-generated subjective global assessment (PG-SGA), hand grip strength (HGS) and appendicular lean mass (ALM) via bioimpedance spectroscopy (BIS). The need for dietetic intervention and frequency of nutrition-related symptoms post CAR-T therapy were recorded.

Results: Fifteen patients (54% female, mean age 61 years, mean body mass index [BMI] 24.7 kg/m^2) were included. All patients were well-nourished as per PG-SGA at baseline, but one patient was sarcopenic (using cut-offs of HGS and ALM). Post CAR-T therapy, 33% ($n = 5$) required dietetic intervention of oral nutrition support. Reported nutrition impact symptoms were nausea ($n = 3$, 60%), vomiting ($n = 2$, 40%), diarrhoea ($n = 2$, 40%) and dysgeusia ($n = 1$, 20%). Of the patients requiring dietetic intervention, 80% ($n = 4$) became malnourished (PG-SGA B).

Conclusions: CAR-T therapy can induce symptoms that lead to malnutrition and require nutritional intervention. Further research is needed to investigate nutritional status in the absence of proactive nutrition intervention and further to this, test the effectiveness of nutritional interventions to prevent post treatment nutritional decline in a randomised controlled trial.

Contact Author: Danika Carty, danikajancarty@gmail.com

ID: 119 | Confidence in weight management care: A western Australian health professional survey**Jasmin Cavanagh¹**, Janelle D. Healy¹, Claire Pulker²¹*Curtin University*, ²*East Metropolitan Health Service*

Background or Rationale: The increasing numbers of people experiencing overweight and obesity in Western Australia requires a collaborative approach to weight management care between all health professionals.

Aim: To explore the confidence of Western Australian health professionals in the provision of dietary and physical activity advice for weight management care, including factors associated with confidence, and if confidence impacts on provision of weight management advice.

Methods: Western Australian health professionals and general practitioners were invited to complete a survey of weight management care in 2020. Confidence levels were determined using descriptive statistics, factors associated with confidence were identified using chi-square test, and logistic regression determined the relationship between confidence levels and provision of advice.

Results: Most health professionals ($n = 155$), excluding dietitians, reported lack of confidence in setting weight loss goals, and dietary advice (73%–76%); dietitians lacked confidence in physical activity recommendations (61%). Training, knowledge of best practice, and use of evidence-based guidelines were significantly associated with confidence in provision of weight, dietary and physical activity advice. Confidence in setting weight loss goals increased the odds of providing weight management advice (OR 3.9, 95% CI 1.2–13.0, $p = 0.03$).

Conclusions: Training for Western Australian health professionals (excluding dietitians) is needed to increase knowledge and confidence. It should include evidence-based dietary and physical activity guidelines and setting weight loss goals. Increased confidence may lead to greater provision of advice and improved health outcomes. Research to explore the impact of other factors on the provision of weight management care is needed.

Contact Author: Jasmin Cavanagh, j.smith31@live.com

ID: 33 | Dietary intakes and physical activity levels of faecal microbiota transplant stool donors**Annabel Clancy¹**, Anoja Gunaratne¹, Thomas Borody¹¹*Centre for Digestive Diseases*

Background: Faecal Microbiota Transplantation (FMT) is the process of transferring microbiota from

the stool of a healthy donor to the bowel of an unwell recipient. Current guidelines for healthy donors focus on the absence of disease. Minimal research has been conducted to explore other health promoting factors such as diet and lifestyles of donors to improve FMT efficacy.

Aim: To examine the diet, physical activity, quality of life and sleep habits of current FMT donors.

Methods: Six donors at one centre were invited to complete a 3-day food record, and validated physical activity, quality of life and sleep questionnaires. Food records were analysed using Foodworks V10. Questionnaires were scored according to published guidelines. Comparisons against the general population were drawn.

Results: Two donors (1 Male) completed the diaries and questionnaires. Both donors met their estimated average requirements (EAR) for all nutrients. The female donor met the adequate intake (AI) for fibre (34g/day). However, the male donor did not meet the AI for fibre with an average intake of 25g/day. Both donors were highly physically active, scoring in the top activity category of 'health enhancing physical activity'.

Conclusions: Stool donors consumed more fibre than the average Australian population (Median 20.7g), although this did not necessarily meet intake for health promotion. Physical activity levels of donors were above levels seen in the average Australian population. Further research is required to understand the impact of donor diet and lifestyle on FMT efficacy.

Contact Author: Annabel Clancy, annabel.clancy@cdd.com.au

ID: 244 | Lifestyle interventions for the self-management of endometriosis: A scoping review**Cara Cook¹**, Catherine Knight-Agarwal¹, Simone O'Neill¹¹*The University of Canberra*

Background: Diet and lifestyle have been proposed as a potential management tool for adverse symptoms associated with the endometriosis. However, lifestyle modification has received limited investigation.

Aim: To identify and provide a descriptive overview of the effects of lifestyle for the self-management of endometriosis including diet/whole foods, physical activity, rest and meditation.

Methods: The Joanna Briggs Institute Protocol for Scoping Reviews was employed, with five databases searched. The scope was unlimited for date, country of origin, mandatory inclusions were: diet/whole food in combination

with either rest, or meditation or physical activity, with a positive diagnosis of endometriosis. Outcomes measured included self-reported improvement in symptoms.

Results: Four papers published between 2003 and 2021 met inclusion describing the impact of lifestyle upon self-management of Endometriosis. Homogeneity of diets or whole food regimes was lacking, giving mixed outcomes for self-reported management. Diets varied, including: the FODMAP diet, Mediterranean Diet, Paleo Diet, Vegetarian and Veganism, as well as Gluten and Sugar Free. Results for exercise and rest were mixed.

Conclusions: Evidence for efficacy of specific lifestyle regimes to support self-management, is presently lacking. Rigorous intervention trials are required, specifically reviewing diets such as FODMAP, Mediterranean or other low inflammatory regimens. Dietitians with their expertise in nutrition are well placed to guide lifestyle modification in a safe and supported environment. Diets such as the low FODMAP diet are ideally promoted and monitored by an APD due to its complex nature ensuring those exploring its use, is not at risk of malnutrition during the elimination phase of the diet.

Contact Author: Cara Cook, cooksalottle@gmail.com

ID: 39 | 'People will not make choices unless they are forced to': Hospital foodservices, food waste, and COVID-19

Nathan Cook¹, Denise Goodwin¹, Jorja Collins^{1,2}, Judi Porter³

¹Monash University, ²Eastern Health, ³Deakin University

Background: An area of healthcare which has been inundated with pressure due to COVID-19 is waste management. This includes waste within hospital foodservices where up to 50% of hospital waste is generated.

Aim: To explore how hospital foodservices were affected by COVID-19, specifically on measuring, and the generation of, food waste.

Methods: A qualitative research design was used whereby staff of hospitals in Victoria were randomly invited to participate. After obtaining consent, semi structured interviews were completed via Zoom with eligible participants who were staff that worked within the hospital foodservice. The line of questioning focused on barriers and enablers to completing food waste audits; data were analysed using inductive thematic analysis.

Results: From 20 interviews of staff from 11 hospitals, five themes emerged: impacts on practice, labour, operational change, technology, and post pandemic expectations. Participants reported experiencing both opportunities and

challenges to hospital foodservice practice as a result of COVID-19. Numerous challenges to practice included increased food waste, contact restrictions and labour shortages. Opportunities included the creation of new positions, technological advancements, and adaptations to collection of food waste data.

Conclusions: COVID-19 had large impacts on hospital foodservice practices, including their capability to measure increased levels of food waste. However, foodservice staff demonstrated adaptability to immediate and forced practice change. Measuring food waste post-pandemic may be supported by some of these changes experienced during COVID-19, beginning the path to sustainable healthcare.

Contact Author: Nathan Cook, nathan.cook@monash.edu

ID: 172 | Educate us! Nutrition education videos for children with type 1 diabetes

Naomi Crosby¹, **Isabella Brookes**², **Jasmine Hanham**², **Amelia Harray**¹

¹Telethon Kids Institute, ²Curtin University

Background: In WA, more than 1200 children with type 1 diabetes (T1D) are under Perth Children's Hospital (PCH) medical management. The current model of care at PCH involves families seeing a dietitian at diagnosis and receiving an education folder, followed up by five sessions within the first year. However, the first year of diagnosis is an overwhelming time for families as they overcome diagnosis shock and make changes to their daily routine, especially for those with low literacy levels. Parents report turning to the internet to seek nutrition management advice. Currently in WA, there are no specific nutrition education videos used to educate children and families living with T1D.

Aim: To create videos to support families with practical evidence-based information on their own devices.

Methods: Pilot videos were produced by APDs, student dietitians and a video content officer. The pilot videos were reviewed by the diabetes research team, families and diabetes clinicians. Through focus groups and surveys, six more videos will be drafted collaboratively with consumers, based on concepts from the patient education folder. These include carbohydrate counting, managing blood glucose rises for fat and protein, fussy eating, healthy snacks, family meals, and sport.

Results: Feedback to date has focussed on the importance of designing videos for a specific audience, a preference for practical application over concepts, and the inclusion of child presenters.

Conclusions: Possible future application includes sharing videos Australia-wide and addressing topics of diabetes technology, sick day management, exercise and mental health. This project is translating research into practice.

Contact Author: Naomi Crosby, naomi.crosby@health.wa.gov.au

ID: 247 | 'They just need to toughen up': Academic perceptions of disordered eating in students

Janeane Dart¹, Christie Bennett^{1,2}

¹Monash University, ²Eat Love Live

Background: It is widely reported that nutrition and dietetic students have a higher prevalence of eating disorders, disordered eating and body image disturbances, compared to other professional training programs. There is currently no research reporting academic perceptions on student experiences or methods to address academic bias.

Aim: What are academics' perspectives to current curriculum student disordered eating and body image disturbances?

Methods: During an education seminar, staff took part in a workshop raising awareness of disordered eating issues in nutrition and dietetic students. A pre and post anonymous qualitative survey was conducted via Qualtrics. Results were thematically analysed, using an interpretive, inductive approach.

Results: The pre-survey revealed that many staff members could not identify areas of the curriculum that might be triggering for students. Staff members that did identify areas of concern included food practicals, students completing dietary recalls and completing anthropometry on students. The post survey identified that some staff were 'challenged' and others concerned about the lack of awareness of staff '...Scared and worried about some of the views of our department staff'. Possible strategies identified to reduce harm included trigger warnings, altering language around food and bodies and including more body inclusive content.

Conclusions: This workshop identified that staff teaching into the program may need support to identify disordered eating triggering content. However, many (but not all) staff members were open to making their teaching more inclusive and safer for students.

Contact Author: Janeane Dart, janeane.dart@monash.edu

ID: 68 | Distributing public health information and building trust via digital communication: An evaluation of current strategies

Olivia Downie¹, Alice Rogers², Shelley Wilkinson², Helen Truby^{2,3}

¹Queensland Health, ²The University of Queensland, ³Monash University

Background: Although research into the evidence-based content of health promotion messages grows, there is a gap in determining how organisations deliver their engagement strategies across their digital platforms.

Aim: To evaluate the communication strategies of government groups, not-for-profit organisations, and industry groups in disseminating nutrition content across digital platforms and how they develop trust with their audience.

Methods: This exploratory investigation analysed the engagement strategies of 25 organisations considered representative of government, not-for-profit and industry groups based on the framework for effective communication and building trust (adapted from the World Health Organisation's [WHO] 'Communicating risk in public health emergencies' guidelines). These data were scored using a systematic coding system adapted from the WHO criteria.

Results: Of the 25 organisations examined, all were active across Facebook, Instagram and Twitter, however, there were large variations in the number of likes, followers and use of hashtags. One organisation had 17 610 photos with their hashtag, whilst other groups did not utilise a personalised hashtag. Readability scores ranged from 20.5 to 75.6 out of a possible 100. The overall adjusted scores ranged from 29.5 to 50, out of a possible 55.5 using the adapted WHO criteria.

Conclusions: Each organisation had their own merits and shortcomings in communicating information, with no single organisation excelling in every criterion. Aspects of the WHO framework can be applied to the science of nutrition to development bold new engagement strategies for effective communication of trustworthy information. Further research exploring strategies utilised by individuals on social media using this approach would be beneficial.

Contact Author: Olivia Downie, oliviadownie98@gmail.com

ID: 208 | On-demand snacks reducing costs in a rehabilitation setting

Jennifer Ellick¹, Danielle Cave², Olivia Wright

¹STARS, Queensland Health, ²The University of Queensland

Background: The Surgical, Treatment and Rehabilitation Service (STARS) (Herston, Brisbane) provides a 'tea trolley' snack service to subacute patients 3 times per day. An audit revealed opportunities to reduce waste and cost, increase accessibility and variety. The Room Service on-demand foodservice system has been shown to improve patient intake and satisfaction, and reduce waste and costs in acute hospitals.

Aim: To implement a snack service for rehabilitation patients that meets the needs of consumers, minimises waste and maximises cost efficiencies.

Methods: In 2021 a room service on-demand snack service was implemented on two general rehabilitation wards at STARS. Patients were provided with education on ordering snacks, 'on demand', via the bedside Patient Engagement System. Pre and post data evaluated staff satisfaction, patient satisfaction, intake, waste, and cost (labour and food).

Results/Outcome: A total of 26 responses from staff and 34 from patients were received. Staff were satisfied, overall, with both systems. Patient satisfaction ratings of the original 'tea trolley' system were marginally higher than the on-demand snacks system (90% vs. 81.5% rated as satisfied/neutral respectively). The average percentage of waste (17%) and intake (83%) was the same and similar numbers of items were served (1522 trolley, 1533 on demand); however there was a 44% labour saving with on-demand snacks.

Conclusion/Future Directions: Implementing on-demand snacks in the general inpatient rehabilitation setting did not change staff or patient satisfaction, intake or waste; however food service staff labour costs were reduced. The on-demand service will continue and be re-evaluated in 6–12 months.

Contact Author: Jennifer Ellick, jennifer.ellik@health.qld.gov.au

ID: 24 | Healthy eating made fun: A co-designed online behaviour change program for Queensland families

Rebecca Farletti¹, Kiarah Cuthbert¹, Joanna Munro¹, Li Kheng Chai¹, Jacqueline Walker²

¹Health and Wellbeing Queensland, ²The University of Queensland

Background: Healthy eating behaviours are established in childhood and are important for healthy growth. However, less than 5% of Queensland children eat enough vegetables, and one in four live with overweight or obesity. Supporting children and families to adopt and maintain healthy behaviours can make a significant difference

in children's lives through improved health outcomes and quality of life over the life course. Currently, there are no free, universally available services targeting child obesity prevention in Queensland.

Aim: Boost your Family (working title) is a free, play-centric app-based wellbeing program that aims to support children and families as they build better lifestyle habits together.

Process: Family-based multi-component programs are an effective way of supporting health behaviour change in children, and digital delivery can offer a cost-effective and scalable method that also overcomes common barriers to access, including geographical barriers. By co-designing with Queensland families and health professionals, and collaborating with cross-sector partners, Boost your Family will be a relevant and highly engaging program for the whole family.

Outcomes: The program will be piloted in mid-2022 before launching statewide in Queensland. Family insights from co-design activities and preliminary findings, including feasibility, engagement, satisfaction and health behaviour change, will be presented at the conference.

Future directions: The program has the potential to inform the statewide dissemination of an evidence-based healthy lifestyle program for families, provide valuable insights regarding child healthy eating behaviours and family-based behaviour change, and offers a scalable platform for future expansion into new topics, settings, and populations.

Contact Author: Rebecca Farletti, rebecca.farletti@hw.qld.gov.au

ID: 89 | The rate of long-term complications in adults with a gastrostomy: A systematic review and meta-analysis

Emily Farrugia¹, Caroline Tuck², Shanelle Bailey¹

¹Northern Health, ²La Trobe University

Background: Gastrostomy feeding represents a vital component of supportive care provided to people with swallowing or feeding difficulties and reducing risks is a crucial aspect of care. The rate of specific long-term complications is currently unknown in the adult population.

Aim: To determine the prevalence of specific long-term gastrostomy-related complications and unplanned replacements in adults.

Methods: A prospective systematic review of MEDLINE, CINAHL and Embase databases was performed. Key complications amongst studies relevant to percutaneous endoscopic gastrostomy tubes, radiologically inserted gastrostomy tubes and balloon replacement tubes were critically appraised by two independent reviewers. Results

were synthesised quantitatively in a meta-analysis using random effects where the population and condition were sufficiently homogeneous.

Results: In total, 431 studies were identified, of which 17 were included. 8.5% of adults with a gastrostomy were found to have had an infection 42 days after initial tube insertion ($p = <0.01$) whilst 13% had hypergranulation ($p = 0.01$). Displacement occurred across 10.8% of adults, with age presenting as a risk factor ($R^2 = 20\%$) following meta-regression, however this did not reach statistical significance due to sample size ($p = 0.08$).

Conclusions: The prevalence of complications in adults with a gastrostomy varies amongst the literature. Age may provide a guide for risk of displacement amongst adult cohorts, though further studies reporting prevalence of gastrostomy-related complications along with participant demographics are required.

Contact Author: Emily Farrugia, emily.farrugia@nh.org.au

ID: 3 | Elective surgery in adult patients with excess weight: Can preoperative dietary interventions improve surgical outcomes?

Sally Griffin¹, Michelle Palmer², Esben Strodl³, Rainbow Lai², Matthew Burstow⁴, Lynda Ross³

¹Queensland Health and Queensland University of Technology, ²Queensland Health, ³Queensland University of Technology, ⁴Logan Hospital

Background: Excess fat can complicate surgery and is a risk factor for postoperative complications, and dietitians are being asked to assist patients to lose weight preoperatively.

Aim: To summarise the literature regarding the impact of preoperative dietary interventions on non-bariatric surgery outcomes for patients with excess weight or obesity.

Methods: PRISMA guidelines were followed, and four electronic databases were searched for non-bariatric surgery studies, which evaluated surgical outcomes resulting from a preoperative dietary intervention that focused on weight loss, fat loss, or improvement of liver steatosis.

Results: Fourteen studies, including five randomised controlled trials, were selected. Laparoscopic cholecystectomy, hernia repair, and liver resection were most studied. Diet duration was 1–68 weeks (median 9 weeks). Weight loss ranged from 1.4 to 25 kg. Preoperative very low calorie diet (≤ 800 kcal) or low calorie diet (≤ 900 kcal) for one to 3 weeks resulted in: reduction in blood loss for two liver resection and one gastrectomy study (-27 to -411 ml, $p < 0.05$), and for laparoscopic cholecystectomy, reduction

of 6 min in operating time ($p < 0.05$) and reduced difficulty of aspects of procedure ($p < 0.05$). There was no difference in length of stay ($n = 7$ studies). No consensus was found regarding other surgical outcomes, as studies examining the same surgery types were too few and reporting of outcomes too inconsistent.

Conclusions: Preoperative ≤ 900 kcal diets for one to three weeks could improve surgical outcomes for laparoscopic cholecystectomy, liver resection, and gastrectomy. Multiple randomised controlled trials with common surgical outcomes are required to establish impact on other surgeries.

Contact Author: Sally Griffin, sally.griffin@hdr.qut.edu.au

ID: 43 | Investigating nutrition knowledge of a professional soccer club youth squad

James Hart¹, Kathryn Jackson²

¹Flinders University, ²Flinders University, College of Nursing and Health Sciences, Nutrition and Dietetics

Rationale: Adolescent male soccer players are vulnerable to unsubstantiated nutrition messages which may have a negative impact on their dietary intake to support health and sports performance. Understanding the nutrition knowledge of adolescent soccer players may assist with targeted nutrition education.

Aim: To evaluate any gaps in nutrition knowledge of young soccer players using an online Nutrition Knowledge Questionnaire.

Methods: Adolescent male soccer players ($n = 14$; aged 14–19 years) from the Adelaide United Football Club youth squad completed the validated online Finland Nutrition Knowledge Questionnaire. The 79-item Nutrition Knowledge Questionnaire covered nutrition recommendations, dietary supplements, energy intake and recovery and the association between food choices and body image. Descriptive statistics and crosstabs analysis within the Qualtrics™ Experience Management (XM) software determined players nutrition knowledge.

Results: 60% of players correctly identified the nutrition recommendations for endurance athletes, 64% for dietary supplements, 76% for fluid and hydration, 55% on energy intake and recovery and 52% for the association between food knowledge and weight loss/gain. Moderate nutrition knowledge was evident for carbohydrates (62%) as an energy source for sports performance, healthy fats (54%), protein for recovery (49%), fluid requirements for hydration (64%) and food intake on weight management (57%).

Conclusions: These results suggest adolescent soccer players would benefit from appropriate nutrition education

by an Accredited Practising Sports Dietitian to improve the nutrition knowledge of the entire squad, with a particular focus on the identified knowledge gaps.

Contact Author: James Hart, Hart0339@flinders.edu.au

ID: 133 | Nurturing student dietitians to emerge as interprofessional practitioners

Susan Heaney¹, Leanne Brown¹, Jane Ferns¹, Alexandra Little¹, Lisa Urquhart¹, Elesa Crowley^{1,2}

¹University of Newcastle, ²Tamworth Rural Referral Hospital

Background: Interprofessional practice is a crucial component of dietetic care and a core criterion of the *National Competency Standards for Dietitians in Australia 2021*, under the collaborative practice domain. The University of Newcastle Department of Rural Health has two decades of experience in designing and delivering interprofessional education for health profession students.

Aim: To describe the program of interprofessional education delivered and outline perspectives of dietetics students who participated during placement.

Methods: A mixed-methods study of placement experiences was conducted with dietetics students who had completed placements supported by the Department of Rural Health. Perspectives relating to interprofessional education provided by dietetics students were identified and synthesised.

Results: Collaborative practice skills are fostered by interprofessional education. Our activities include clinically, and non-clinically based learning focused on the core competencies of interprofessional education, including communication, teamwork, leadership, and clarification of roles and responsibilities. Thirty-two out of 34 dietetics students provided their perspectives on these activities during interviews. They valued the opportunity to participate in activities that improved their understanding, respect, and appreciation for others' roles. Dietetics students identified that interprofessional education was useful in demonstrating experience of collaborative practice skills within job applications. Additionally, the experience of living and socialising with students from other professions provided an opportunity for rapport building, making working with these professions less daunting.

Conclusions: A program of interprofessional education activities explicitly teaching the skills needed to prepare dietetics students for future patient-centred collaborative practice is an invaluable resource to ensure that competency standards are met.

Contact Author: Susan Heaney, susan.heaney@newcastle.edu.au

ID: 81 | A systematic review of reviews assessing the effectiveness of obesity prevention interventions

Noor Imad¹, Heidi Turon², Alice Grady, Rebecca Wyse, Helen Almond³, Alecia Leonard, Luke Wolfenden, Stephen Keenan, Serene Yoong¹

¹Swinburne University of Technology, ²University of Newcastle & Hunter New England Population Health, ³University of Tasmania

Background: High body mass index incurs significant morbidity and mortality on the population. To address this, many interventions to prevent excessive weight gain have been developed and their effects synthesised in systematic reviews.

Aim: To provide an overview of the current evidence-base by synthesising the effectiveness and cost-effectiveness of obesity prevention interventions in children and adults.

Methods: This overview of reviews was conducted in line with best practice guidance from the Joanna Briggs Institute and the Cochrane Handbook. A search of peer-reviewed literature was run in 5 databases including only publications from 2010 to 2020, as we were interested in including the most contemporary evidence. Systematic reviews were included if they examined the effectiveness of obesity prevention interventions and assessed body mass index. Data extraction was undertaken by 1 independent reviewer. The risk of bias was assessed using the critical appraisal checklist for systematic reviews and research synthesis developed by the Joanna Briggs Institute. Interventions were categorised according to the Institute of Medicine Accelerating Progress in Obesity Prevention Report.

Results: A total of 8371 records were identified through electronic database searching. We screened 6787 records after the removal of duplicates and included 132 studies plus 17 from other sources. Included studies focused on children (aged between 0 and 18) ($n = 114$), on adults only ($n = 21$) and on both ($n = 14$). This consisted of 76 diet and physical activity behavioural interventions, 23 diet-only interventions, 17 physical activity-only interventions.

Conclusions: Findings from this review will identify where sufficient evidence exists for interventions that warrant implementation, and highlight gaps in the evidence base.

Contact Author: Noor Imad, noorimad7@gmail.com

ID: 72 | Title: Micronutrient intakes in a young antenatal population – Retrospective survey over 10 years at a Sydney hospital clinic**Merryl Ireland^{1,2}**, Suzie Ferrie¹¹RPAH, ²University of Sydney

Background: Nutritional requirements are increased in young people to support growth, but micronutrient needs in particular are often not met. During pregnancy, nutrition is critical for the normal growth and development of the foetus, thus nutritional concerns arise when pregnancy occurs within these young age groups. Overseas data indicate that pregnancy outcomes are poorer, and that calcium and iron intakes may be of particular concern, but there is no Australian data since 1995 to describe nutrition in this cohort.

Aim: To describe nutritional intakes in a young antenatal population with particular emphasis on calcium and iron intake.

Method: A retrospective audit was conducted using 404 records from a young parents' antenatal clinic. Pre-pregnancy Body Mass Index (BMI), pregnancy weight gain, baby weight at birth, nutritional biochemistry, dietary intake, and supplement use were collected in routine assessment of pregnant clients aged 14–24 years. Younger (aged 14–18 years) and older (aged 19–25 years) groups were compared.

Results: There was no difference in pre-pregnancy BMI for age, pregnancy weight gain, baby birth weight or outcomes, between the age groups. Intakes were inadequate for calcium in 72% of clients and for iron in 82%. The older group had more adequate calcium intake ($p = 0.0001$). Iron status declined in both groups during the pregnancy. Supplement use was more common in clients with poor iron ($p = 0.015$) or vitamin D status ($p < 0.0001$).

Conclusion: Micronutrient intake is inadequate in this nutritionally vulnerable population. Further research would be beneficial to identify effective interventions to improve nutrition in this cohort.

Contact Author: Merryl Ireland, merryl.ireland@sydney.edu.au

ID: 96 | A Scoping Review of Smartphone Applications targeting nutrition in the under 5's**Sofea Izzaty Saiful Yew¹**, Jacqui Palmer¹, Beatrice Murawski¹, Clare Dix¹¹University of Queensland

Background: Over a quarter of Australian children are overweight or obese, which in part is due to poor dietary behaviours. Research indicates that interactive resources may support parents to engage with information that promotes a healthy diet. Mobile apps have the potential to

address this need and promote healthy nutrition for young children, however there is limited evidence showing that such sources are reliable and trustworthy.

Aims: To identify currently and freely available apps that target nutrition in children 0–5 years and appraise their trustworthiness and relevance to a range of groups including those with special interests/needs.

Methods: Systematic searches of the Australian App and Google Play Stores were conducted on Apple and Android devices (Jan–Feb 2022) using pre-specified search terms related to children's nutrition. The first 50 results were screened and relevant apps downloaded to assess components and content. Apps with a nutrition component were included if they targeted parents or carers of children aged 0–5. Apps that used gamification to target nutrition were limited to ages 4–5 in line with screen time recommendations.

Results: Preliminary findings identified a large amount of apps catering for specific topic areas (e.g., breastfeeding, constipation), but few were from evidence-based sources. Most apps aimed at parents/carers were self-monitoring apps, while child-focused apps were game-based.

Conclusions: Apps that target healthy eating in young children that are both engaging and evidence-based remain scarce. These findings highlight the importance of considering both design and content to influence children's health status.

Contact Author: Sofea Izzaty Saiful Yew, s.saifulyew@uqconnect.edu.au

ID: 11 | Picky eating questionnaire and child-reported food preference questionnaire: Pilot validation in Australian-Indian mothers and children**Rati Jani¹**, Rebecca Byrne², Penny Love³, Ong Shu Hwa⁴, Yang Wai Yew, Catherine Knight-Agarwal⁵, Nenad Naumovski⁵, Kimberley Mallan¹Griffith University, ²Queensland University of Technology,³Deakin University, ⁴International Medical University,⁵The University of Canberra

Background: Limited literature has examined parent's perception of children's pickiness in relation to all the five core food groups (vegetables, legumes/beans; fruits; dairy and alternatives; meat and alternatives; cereals), which is representative of a nutritionally balanced diet and critical for optimal growth and development in children.

Aim: To develop and validate two questionnaires in Australian-Indian mothers and children 7–12 years ($n = 482$).

Methods: The core food Picky Eating Questionnaire (PEQ), completed by mothers, identified maternal perceptions of their child's pickiness and the Child-reported Food Preference Questionnaire (C-FPQ) studied children's self-reported food preferences. The questionnaires comprised specific food items commonly available in Australia, across the five core food groups (PEQ, $N = 32$; C-FPQ, $N = 33$ items) and discretionary foods (C-FPQ, $N = 11$).

Results: Exploratory Factor Analysis identified the initial factor structure and Confirmatory Factor Analysis provided construct validity. The PEQ observed five constructs and C-FPQ observed three constructs for food items perceived as picky/non-preferred-green leafy vegetables; other vegetables, pulses/legumes; fruits; whole-grain/wholemeal cereals (PEQ only) and dairy (PEQ only). The PEQ and C-FPQ observed four constructs for food items perceived as not picky/preferred-green vegetables; other vegetables; fruits and nuts and dairy. C-FPQ also observed savoury and sweet discretionary food constructs. All constructs observed acceptable reliability (test-retest, internal consistency) and validity (convergent, relative, predictive) testing. Mean scores indicated that mothers' perception of pickiness was positively correlated with their children's report of non-preference.

Conclusions: In Australia's largest ethnic community, this study pilot validated questionnaires to examine foods mothers perceived as picky or self-reported as non-preferred by Australian-Indian children.

Contact Author: Rati Jani, rati.suj@gmail.com

ID: 60 | Investigating recommendations on vitamin and mineral surveillance and supplementation in upper gastrointestinal cancer survivors: Scoping review

Kirsten Javier¹, Janette Vardy¹, Cindy Tan¹, Sheena Singh¹

¹Griffith University

Background: Early stage upper gastrointestinal cancer patients are primarily treated with surgery with curative intent. Surgeries can affect gastrointestinal function, compromise nutritional status and quality of life. There is no standard practice for survivorship nutrition care in UGI cancer survivors.

Aim: To explore the literature on the recommendations on long-term use and surveillance of vitamin and mineral status in upper gastrointestinal cancer survivors after surgery with curative intent.

Method: A scoping review was conducted, six databases were searched. Additional sources included relevant

government websites, cancer, guideline and nutrition organisations. Searches were limited to publications in English and published between 2010 to September 2021. Two authors reviewed full text articles for publications and data abstraction.

Results: From 684 citations, 23 eligible studies were identified; seven narrative reviews, one systematic review, two national consensus, six practice guidelines, four expert opinions, one position paper, one book chapter and one website. Three practice guidelines did not recommend vitamin or mineral supplementation but recommended nutrition support during follow up. There were no international guidelines or consensus recommendations on vitamin and mineral supplementation in UGI cancer survivors. Fourteen studies suggested vitamin or mineral supplementation and twelve studies recommended surveillance of vitamin and mineral status.

Conclusions: Evidence-based clinical guidelines are lacking on vitamin and mineral supplementation in upper gastrointestinal cancer survivors after surgery. Studies suggest these patients are at nutritional risk and may benefit from vitamin and mineral supplementation and surveillance. Future research is required to obtain more robust evidence on upper gastrointestinal cancer survivorship micronutrient status and supplementation.

Contact Author: Kirsten Javier, kjav0345@uni.sydney.edu.au

ID: 158 | Dietary practices after primary treatment for ovarian cancer

Lizzy Johnston¹, Stuart Ekberg², Bronwyn Jennings³, Nisha Jagasia³, Jolieke van der Pols⁴, Penelope Webb⁵

¹Cancer Council Queensland, ²School of Psychology and Counselling, Queensland University of Technology, ³Mater Hospital, ⁴Queensland University of Technology, ⁵QIMR Berghofer Medical Research Institute

Background: Little is known about dietary practices of women who have completed primary treatment for ovarian cancer, many of whom subsequently experience cancer recurrence and further treatment. Knowledge of dietary practices is needed to optimise care.

Aim: To identify dietary practices post-primary treatment for ovarian cancer, and evaluate how these practices differ by recurrence and treatment status at follow-up.

Methods: Women with ovarian cancer participating in a longitudinal study were provided with an open-ended question after completing a food frequency questionnaire at follow-up timepoints: 'Is there anything we have not asked you about your diet that you feel is important?' Responses were analysed using content analysis and

reported by recurrence and treatment status at food frequency questionnaire completion.

Results: 286 women provided responses on 363 questionnaires. Those undergoing further treatment for recurrence commonly reported dietary regimens with clinical indications (e.g., low fibre to avoid bowel obstructions, high energy/protein to minimise nutritional deficits). Those not undergoing further treatment frequently reported 'popular' diets (e.g., organic, plant-based, alkaline). Dietary practices were mostly affected by poor appetite and treatment late effects for women with recurrence, and other comorbidities, geographical location, family and friends for women without recurrence. Nutrition information sources and personal beliefs informed practices. Participant responses referencing media or online sources often included misinformation.

Conclusions: Following primary treatment for ovarian cancer, women report dietary practices that may not be captured in standard food frequency questionnaires. Dietary practices and factors affecting these practices likely differ by treatment and recurrence status. Improved access to evidence-based dietary information is needed.

Contact Author: Lizzy Johnston, elizabethjohnston@cancerqld.org.au

ID: 248 | Clinical Report: Children with Protein Energy Malnutrition and Micronutrient Malnutrition Secondary to ASD and ARFID, have improved health outcomes with intensive home-delivered feeding therapy program

Leticia Jose¹, Brooke Harcourt¹, Melinda McPherson, Julia Villani

¹*Family Dietetics*

Background: Atypical eating behaviours, limited food variety and strong food preferences are common in the autistic population, with approximately three quarters of autistic children having food and eating issues. Disordered eating patterns may disturb growth and lead to malnutrition.

Methods: 7-year-old female and 10 year-old male siblings, both ASD III (DSM V), non-verbal and attending special development schools, presented with limited accepted foods and chronic protein energy and micronutrient malnutrition (microcytic anaemia, zinc deficiency, low Vitamin B12, low Vitamin A). Community, home delivered therapy was provided by an APD. One to one individualised feeding therapy programs drawing from SOS Feeding Therapy™, Responsive Feeding Therapy and DIR Floortime™ paradigms, were delivered weekly for 9 months.

Results: Both siblings demonstrated gradual improvements; increased participation in meals times, increased variety of foods consumed, decreased anxiety approaching less preferred foods, growth maintenance, improvement in micronutrient profile. With progress being accelerated in the female sibling. Both children also increased in their independence and ability to participate in activities within their community.

Conclusions: Intensive feeding therapy that incorporates play and autonomy cues is an effective way to improve nutritional profile for children with ASD.

Contact Author: Leticia Jose, leticia.jose@familydietetics.com.au

ID: 17 | Improving the nutritional value of the meal service in COVID hotel quarantine

Suzanne Kennewell¹

¹*Sydney Local Health District*

Background: In March 2020 the Federal Government closed Australian borders. States had 48 hours to establish COVID hotel quarantine. In NSW return travellers with COVID symptoms, or complex health needs, were supported in serviced apartments managed by NSW Health. In the absence of on-site commercial kitchens, ready-to-eat food was brought in from an airline caterer and supplemented by a range of extra grocery items.

Aim: To establish a base-line measurement of the initial menu and identify opportunities for improvement.

Method: In June 2020 student dietitians reviewed the menu for total energy (kJ), percentage energy (E%) from saturated fat, protein (g), sodium (mg) and five food groups. Analysis was conducted for standard, Halal, vegetarian, vegan, gluten-free and child menus and nutritious extras available at that time. Improvements were implemented and menus were reanalysed in October 2021.

Results: Protein increased across all menus (range 13-38%), whilst energy percentage from saturated fat decreased in standard (13%), Halal (17%), vegetarian (30%) and child (20%) menus. The recommended sodium upper limit was maintained in the standard menu. Sodium decreased in Halal (13%), vegetarian (23%) and child (21%) menus. The saturated fat percentage of energy and sodium in vegan and gluten-free menus increased, reflecting increases in total energy and protein. Fruit and vegetable serves increased across all adult menus. Fruit, grains and dairy increased for the child menu. Variety improved between 11% and 450% across different menu categories.

Conclusions: Rapid establishment of COVID hotel quarantine and use of alternative industry suppliers provided

initial challenges but significant menu improvements were achieved.

Contact Author: Suzanne Kennewell, Suzanne. Kennewell@health.nsw.gov.au

ID: 18 | Capturing meal satisfaction in COVID hotel quarantine – Using staff and social media as proxy feedback

Suzanne Kennewell¹

¹*Sydney Local Health District*

Background: From March 2020 return travellers to Australia were required to undertake a period of hotel quarantine. In NSW return travellers with COVID symptoms, or complex health needs, were supported in Special Health Accommodation managed by NSW Health.

Due to strict infection control requirements traditional satisfaction surveys could not be used to gauge feedback on the meal service provided. There was potential psychological burden by asking return travellers to complete an electronic feedback survey whilst in mandatory quarantine.

Aim: To develop a proxy method to collect patient feedback and develop an iterative process for service development and improvement.

Methods: Ongoing feedback was sought from Special Health Accommodation support staff through staff meetings and targeted emails regarding verbal feedback and requests received from return travellers. Dietitians providing clinical support to those with special diet needs were surveyed for frequent dietary requirements. Public social media pages supporting return travellers in hotel quarantine were routinely reviewed for common themes, using a passive engagement approach to address potential ethical challenges.

Results: Improvements initiated from staff feedback included: increasing range of cultural meals and extras, vegetarian and vegan meals, vegan and gluten-free desserts and snacks. Improvements initiated from public social media included: introduction of poke bowls and wraps; reducing sodium in meals; increasing the range of salads and vegetables, 'on-trend' and healthy snacks, and meals free-from additives; and development of 'clean' or 'pantry-style' product labels. Staff reported decreased complaints over time.

Conclusions: Staff feedback and social media offer an alternative approach to improving satisfaction with meal service.

Contact Author: Suzanne Kennewell, Suzanne. Kennewell@health.nsw.gov.au

ID: 153 | Maternal BMI and country of birth in relation to adverse pregnancy outcomes in an Australian obstetric cohort

Catherine Knight-Agarwal¹, Deborah Davis¹, Rati Jani², Shawn Somerset¹, Monica Yuri Takito³

¹*The University of Canberra*, ²*Griffith University*,

³*University of Sao Paulo*

Background: The prevalence of gestational diabetes mellitus (GDM) has been rising in line with the increased incidence of maternal obesity. Women with GDM, high body mass index (BMI) or both are at an elevated risk of birthing a large for gestational age (LGA) infant.

Aim: To explore the relationship between country of birth, maternal body mass index with LGA and GDM.

Methods: A retrospective cohort study of 27 814 women residing in Australia, but born in other countries, who gave birth to a singleton infant between 2008 and 2017 was undertaken. Logistic regression analysis was used to examine the association between the aforementioned variables.

Results: A significantly higher proportion of LGA infants was born to overweight and obese women compared to those who were classified as underweight and healthy weight. Asian-born women, with a BMI of ≥ 40 kg/m², had an AOR of 9.926 (3.859–25.535) for birthing an LGA infant. Conversely, Australian-born women with a BMI of ≥ 40 kg/m² had an AOR of 2.661 (2.256–3.139) for the same outcome. Women born in Australia were at high risk of birthing an LGA infant in the presence of insulin-requiring GDM, but this risk was not significant for those with the diet-controlled type. Asian-born women did not present an elevated risk of birthing an LGA infant, in either the diet controlled, or insulin requiring GDM groups.

Conclusions: Women who are overweight or obese, and considering a pregnancy, are encouraged to seek culturally appropriate nutrition and weight management advice during the periconception period to reduce their risk of adverse outcomes.

Contact Author: Catherine Knight-Agarwal, Cathy. Knight-Agarwal@canberra.edu.au

ID: 4 | Are fruit and vegetable intakes associated with cognitive function in type 2 diabetes elderly?

Tsz Kiu Kwan¹, Serena Low^{1,2}, Keven Ang¹, Jun Shi Lai³, Marjorelee Colega³, Foong Fong Mary Chong^{3,4}, Su Chi Lim^{2,4,5}

¹*Khoo Teck Puat Hospital*, ²*Admiralty Medical Centre*,

³*Singapore Institute for Clinical Sciences*, ⁴*Saw Swee Hock*

School of Public Health, ⁵Lee Kong Chian School of Medicine

Background: Type 2 diabetes (T2D) has been associated with a greater risk of cognitive impairment. While aging increases the susceptibility to oxidative damage in the brain, polyphenols and antioxidants from fruit and vegetables have been shown to have protective effects on cognitive function.

Aim: To investigate if higher fruit and vegetable intakes are associated with better cognitive function in a community of older adults with T2D in Singapore.

Methods: This was a cross-sectional study on 555 T2D participants from the SMART2D cohort with a mean age 65 ± 7.6 years. Fruit and vegetables intakes were assessed via a Food Frequency Questionnaire, and cognitive function using the Mini-Mental State Examination (MMSE). The participants were stratified into 4 groups based on daily fruit and vegetable intakes: Group 1, (<1 serving); Group 2, (1–<2 servings); Group 3, (2–<3 servings); and Group 4; (≥ 3 servings). Associations were examined using multiple linear regression models.

Results: The proportion of participants in the groups were 22.9%, 31.9%; 23.2%; and 22.0% respectively. Compared to Group 4, those in Group 1 was significantly associated with the lowest MMSE score ($\beta = -0.89, -1.45-0.33; p = 0.002$) (ptrend = 0.001), and remained statistically significant ($\beta = -0.49, -0.98$ to $-0.01; p = 0.046$) after adjusting for demographics, education, T2D duration, HbA1c, and LDL (ptrend = 0.040).

Conclusions: Higher intakes of fruit and vegetables are associated with better cognitive function in older adults with T2D.

Contact Author: Tsz Kiu Kwan, tszkiu94@gmail.com

ID: 250 | Validation of a food-frequency questionnaire in assessing carotenoid intake

Tsz Kiu Kwan¹, Keven Ang¹, Shelley Roberts^{2,3}, Jun Shi Lai⁴, Marjorelee Colega⁴, Foong Fong Mary Chong^{4,5}, Su Chi Lim^{5,6,7}

¹Khoo Teck Puat Hospital, ²Griffith University, ³Gold Coast Health, ⁴Singapore Institute for Clinical Sciences, ⁵Saw Swee Hock School of Public Health, ⁶Admiralty Medical Centre ⁷Lee Kong Chian School of Medicine

Background: Food frequency questionnaire (FFQ) is a common dietary assessment tool used to study dietary patterns in large prospective studies, however, having a reliable and valid FFQ is imperative to examine associations between diet and disease outcomes. Studies have shown that serum carotenoids are valid and reliable biomarkers to assess dietary fruits and vegetables intake.

Aim: To validate the newly adopted FFQ in the KTPH diabetes cohort against serum carotenoids and 3-day food diary (3DFD).

Methods: This study analysed blood biomarkers and dietary data from 60 T2DM participants from the KTPH diabetes cohort. Dietary carotenoid data from FFQ and 3DFD were quantified using the USDA FNDDS database. Serum carotenoids were analysed via the high-performance liquid chromatography (HPLC) method. The nutrient density model was applied to carotenoid intake values from the FFQ to adjust for energy intake. Spearman's correlation coefficient was used to determine associations between serum and dietary carotenoid values.

Results: The correlation between carotenoids assessed via FFQ and 3DFD is moderate to high ($r = 0.382-0.571, p = 0.000$). For the validation of FFQ with serum carotenoids, β -carotene ($r = 0.334, p = 0.009$) and Lutein and Zeaxanthin ($r = 0.356, p = 0.005$) were found to have significant associations. Stronger correlations were observed in energy-adjusted α -carotene ($r = 0.270, p = 0.037$) and Lutein and Zeaxanthin ($r = 0.359, p = 0.005$).

Conclusion: Significant correlations were observed with serum and dietary carotenoids for α -carotene, β -carotene, Lutein and Zeaxanthin. These results are consistent with other literatures, strengthening the validity of the FFQ in our cohort.

Contact Author: Tsz Kiu Kwan, tszkiu94@gmail.com

ID: 44 | An Overview of Queensland Health Foodservice Systems

Michelle Lambert¹, Denise Cruickshank², Merrilyn Banks³, Cassandra Benson⁴

¹The University of Queensland, ²Queensland Health, ³Royal Brisbane and Women's Hospital, ⁴Logan Hospital

Background: Queensland Health's foodservice systems are responsible for meeting the nutritional needs of their clients with adequacy impacting on patient and health system outcomes. An understanding of foodservice systems is important in planning and managing quality improvement.

Aim: To identify trends, risks and challenges in foodservice systems used across Queensland's public health services.

Methods: Interviews were conducted by a Dietitian in response to food supply changes and to provide an overview of foodservice systems. Responses were categorised using the systems model and analysed for frequencies and themes.

Results: A demographic matrix identified a large proportion (51%) of small, rural, acute facilities and highlighted decentralisation and variation across Queensland Health foodservices. Most sites used a hybrid production method

of cook-fresh and sourced frozen meal components, with centralised distribution. An increasing trend to cook-fresh production identified risks associated with limited access to qualified staff and staff training. Analysis of food safety and management systems revealed limitations in cold/frozen storage, procurement including access of texture modified and vegan meals, and access to dietitians for menu and allergen management support.

Conclusion: The diversity across Queensland Health foodservice systems results from variations in location, type and size with similarly unique support required. Overall, Queensland Health foodservice systems continue to adapt to internal and external influences facilitated by management systems, with compliance or plans towards standards and best practice guidelines. Improved access to dietitians may address some highlighted gaps and risks. These findings are important in informing the direction for future quality improvement measures in healthcare foodservices.

Contact Author: Michelle Lambert, michellewilloughby80@gmail.com

ID: 185 | An environmental audit of food waste and single-use food packaging in a maternity hospital

Amelia Lee¹, Madina Bergmeier¹, Kineta Sulemani¹, Elisabeth Gasparini²

¹Deakin University, ²Royal Women's Hospital

Background: Food waste in the hospital has been observed to be increasing, impacting cost and the environment. The hospital is thus dedicated to improving waste management and reducing its environmental footprint.

Aim: To establish the amount of food waste and single-use food packaging generated by patients at mealtimes in the antenatal, postnatal and gynaecological wards.

Methods: Unconsumed patient food and disposable plastic or cardboard food packaging were collected over two weeks from the wards. After each meal service, the left-over food from patient meal trays was scraped into a container and weighed. Disposable food packaging was collected in garbage bags and weighed. Reference weights for meals served at each mealtime were also collected and weighed and used to calculate percentage of food wasted.

Results: Fifty-one percent of food was wasted. The average food waste and food packaging generated by each patient per mealtime was 410g±190g and 70g±20g, respectively. The waste produced at lunch and dinner was significantly higher than at breakfast. Waste

produced in the gynaecological wards was higher than maternity wards. Food and food-related waste contributes 2.2% of hospital waste, corresponding to 21.3 tonnes of carbon dioxide. Potential factors contributing to waste include the high turnover of patients and COVID-19 infection control measures.

Conclusions: Food and food packaging waste will continue to be monitored. It is recommended to reduce the use of single-use food packaging and/or use biodegradable food packaging. Further exploration of patient experiences with the food service and mealtime environment is needed.

Contact Author: Amelia Lee, amelia.lee@deakin.edu.au

ID: 88 | Improving nutritional outcomes of patients undergoing autologous stem cell transplants

Rania Liaros¹

¹South Eastern Sydney Local Health District

Background: The conditioning regimen administered during a haematopoietic stem cell transplantation (HSCT), significantly burdens patients due to increased metabolic demands and nutritional impact symptoms limiting adequate oral intake. Local nutrition implementation has traditionally been reactive, with resistance to enteral nutrition. Without adequate timely nutritional support this may result in poorer nutritional outcomes including malnutrition.

Aim: To (i) incorporate nutrition care as part of overall treatment plan for patients undergoing HSCT and (ii) improve the nutritional outcomes of patients undergoing HSCT.

Methods: A baseline retrospective medical note audit of patient admissions was undertaken for those undergoing HSCT (16th July 2019–14th July 2020). An education session with haematologists and nursing staff outlined nutritional guidelines in oncology, specifically early detection and treatment of nutritional disturbances. Following education, prospective data were collected on HSCT admissions (7th January 2021–14th July 2021). Data included type of nutrition intervention and percentage weight loss.

Results: At baseline, 17 patients were admitted with an average weight loss of 5% within 1 month following HSCT. Following the education session, preliminary data found 12 patients were admitted with an average weight loss of 3.8% within 1 month following HSCT. Dietitian referrals prior to HSCT increased from 59% ($n = 10$) at baseline to 100% ($n = 12$) in the preliminary data. Enteral nutrition usage increased from 12% ($n = 2$) to 50%

($n = 6$) whereas parenteral nutrition usage decreased from 18% ($n = 3$) required to 8% ($n = 1$).

Conclusion: Preliminary findings demonstrate the implementation of a local nutritional pathway for patients undergoing HSCT is beneficial for improving nutritional outcomes.

Contact Author: Rania Liaros, rania.liaros@health.nsw.gov.au

ID: 63 | Does adherence to a Mediterranean Diet alter tissue n-3 and n-6 fatty acid levels? Evidence from a systematic review

Evangeline Mantzioris¹, Bev Muhlhausler², Anthony Villani³

¹University of South Australia, ²CSIRO, ³University of the Sunshine Coast

Background: The Mediterranean Diet (MedDiet) is described as a plant-based dietary pattern consistent with a high intake of vegetables, fruits, nuts, legumes, unprocessed cereals, and daily use of extra-virgin olive oil incorporated into all meals. The MedDiet is also often lauded as being rich in n-3 polyunsaturated fatty acids (PUFA) derived from fish, green leafy vegetables, walnuts and beans. However, whether adherence to a MedDiet results in appreciable increases in tissue levels of n-3 PUFAs is yet to be systematically investigated.

Aim: To synthesise the literature to determine the impact of the MedDiet on n-3 PUFA tissue levels.

Methods: The systematic review was registered with the International Prospective Register of Systematic Reviews (registration no. CRD 42020162114). MEDLINE, Embase, AMED and CINAHL databases were searched for observational studies and randomised controlled (RCTs) studies reporting on adherence to a MedDiet and tissue levels of n-3 and n-6 PUFAs. Quality assessment involved using the Joanna Briggs Institute quality assessment tools for RCTs, cohort studies and cross-sectional studies.

Results: Twenty-two studies were included ($n = 15$ RCTs and $n = 7$ observational studies). All observational studies reported a positive relationship between adherence to a MedDiet and higher tissue n-3 PUFA levels. Two-thirds (10/15) of RCTs reported significant increases in n-3 PUFA concentrations. In contrast, the impact on tissue n-6 PUFA concentrations was inconsistent.

Conclusions: MedDiet adherence is associated with higher tissue levels of n-3 PUFA, but effects on tissue n-6 PUFA levels are unclear. We also identified significant heterogeneity in the description and definition of the MedDiet.

Contact Author: Evangeline Mantzioris, evangeline.mantzioris@unisa.edu.au

ID: 123 | Can we (successfully) add food to a nasogastric refeeding protocol for patients with eating disorders?

Kylie Matthews-Rensch¹, Clare Cutmore¹, Kate Morgan¹

¹Queensland Health

Background: The QLD state-wide eating disorder nasogastric refeeding protocol includes a prolonged period (>7 days) of nil by mouth (NBM) status. Previous research found that the re-introduction of an oral diet was a concern due to potential exacerbation of the eating disorder.

Aim: To assess the safety and acceptance of the addition of 'snacks'.

Methods: Patients admitted for the eating disorder protocol received snacks from day 5. Patients were provided the opportunity to opt out. Food charts were kept. Patients were considered ineligible for the study if they were inter-hospital transferred or the protocol was ceased. Data were collected from July 2020 to March 2021 and included demographics (age, gender, eating disorder type), snack consumption, opt outs, and clinical incident data. Within 72 h of discharge, patients were sent a survey via SMS. The survey consisted of five questions regarding their experience. Staff were also provided opportunities to give feedback.

Results: 107 patients were admitted (92.5%F, 25.9 ± 9.9 years, 62.6%anorexia nervosa), with 86% ($n = 92/107$) appropriate to participate. Seven patients opted out and 27 were ineligible. Of the 63 participants, 52 food charts were available. A quarter (23% [$n = 12/52$]) consumed nothing and 48% ($n = 25/52$) ate >50%. Twenty-six patients completed the survey with the majority (81%, $n = 21/26$) reporting that snacks helped them return to eating. Half (54% [$n = 14/26$]) agreed that snacks improved their inpatient experience. Staff feedback was mostly positive. No clinical incidents were reported.

Conclusions: Adding food to an eating disorder protocol is safe, improves patient experience and assists in returning to eating.

Contact Author: Kylie Matthews-Rensch, kylie.matthews@health.qld.gov.au

ID: 206 | Exploring the relationship between diet quality and self-efficacy in chronic kidney disease: Can dietitians make a difference?

Erynn McAuley¹, Lynda Ross¹, Helen MacLaughlin^{1,2}, Mary Hannan-Jones¹

¹Queensland University of Technology, ²Royal Brisbane and Women's Hospital

Background: Adherence to high quality dietary patterns is associated with lower risk of disease progression and all-cause mortality in chronic kidney disease. Self-efficacy is recognised as a factor that may lead to better dietary adherence. However, the association between diet quality and self-efficacy is unknown.

Aim: To explore an association between diet quality and self-efficacy in adults with chronic kidney disease.

Methods: This cross-sectional study used surveys to measure self-efficacy (Self-Efficacy for Managing Chronic Disease 6-item scale [SEMCD-6, 0–10]) and diet quality (Australian Recommended Food Score (ARFS, 0–73); and the alternative-Mediterranean Diet Score (aMED, 0–9)). Dietary data were collected using the Australian Eating Survey (AES) and two 24-hour dietary recalls. Association was measured using Spearman's correlation.

Results: Forty-two participants completed the study, and 48% had previously seen a dietitian for CKD. Overall mean diet quality was poor (aMED 2.59 ± 1.44 , ARFS 32.27 ± 7.66). Participants who had seen a dietitian had higher mean diet quality measured by the aMED compared to those who had not (MD 1.25, 95% CI [0.32, 2.18], $p = 0.01$). Whereas diet quality measured by the ARFS was similar between groups (MD -0.96 , 95% CI $[-6.27, 4.35]$, $p = 0.72$). Self-efficacy was high with a mean score of 7.2 ± 2.2 . There was a moderate correlation between AERFS diet quality and self-efficacy when participants had seen a dietitian ($r = 0.452$, $p < 0.05$).

Conclusions: Improving self-efficacy may assist better adherence to a high-quality dietary pattern in patients with chronic kidney disease. Further investigation into this relationship can help direct future dietary interventions for this patient group.

Contact Author: Erynn McAuley, erynn.m94@hotmail.com

ID: 198 | Towards better gut health services – experiences in a regional community health setting

Rachel Melton¹

¹Gateway Health

Background: Gut health issues make up to 30% of the reason for referral to Dietitians in a regional Victorian community health service. While effective management of functional gastrointestinal disorders has been widely studied and includes a multidisciplinary approach, access to specialist, multidisciplinary care in regional communities may be limited, leaving clients with suboptimal care.

Aim: To evaluate current management of clients with functional gastrointestinal disorders attending a regional

community health service against evidence-based practice guidelines to identify areas for improvement.

Methods: A literature review was conducted to identify key components of evidence-based practice followed by stakeholder engagement with a specialist clinic within a tertiary health facility. A comparative analysis was subsequently undertaken against dietetic, mental health and continence assessment and management of functional gastrointestinal disorders within a regional, primary care setting.

Results: Practice gaps included a lack of integration with other disciplines, formal triage processes and screening for red flags, in addition to the need for more specific nutrition assessment tools. A gap in knowledge of functional gastrointestinal disorders exists across multiple disciplines. Application of current models of care from large, tertiary medical facilities was deemed not feasible for regional community health settings.

Conclusions: A model of care for clients with functional gastrointestinal disorders in regional community health settings should include an integrated, multi-disciplinary approach, but this may require increased staff capacity and awareness.

Contact Author: Rachel Melton, rachel.melton@gatewayhealth.org.au

ID: 154 | Comparison of pregnancy outcomes amongst women with and without a history of bariatric surgery

Tayla Miegel, Michelle Palmer¹, Lisa Vincze², Taylor Guthrie³, Susan de Jersey⁴, Shannon Huxtable¹, Helen Porteous¹

¹Queensland Health, ²Griffith University, ³Royal Brisbane and Women's Hospital, ⁴Metro North Hospital and Health Service

Background: Australian bariatric surgery (BSurg) rates more than doubled between 2005 and 2015, with half of recipients being women of child-bearing age. More information is needed on the impact of BSurg during pregnancy on outcomes for mothers and their babies.

Aim: To compare maternal and neonatal outcomes and gestational weight gain (GWG) of women with and without a history of BSurg who delivered at an urban hospital between 2016 and 2020.

Methods: For each BSurg woman, two controls (non-BSurg) were matched on age (± 1 year), pre-pregnancy BMI (± 1 kg/m²) and date of confinement (± 3 months). Demographic, pregnancy and GWG outcomes were

sourced from hospital and medical records. Chi-squared and t-tests were used to compare data between BSurg and non-BSurg women.

Results: Two hundred and ninety-seven women were included (31 ± 5 years, 32% nulliparous, pre-pregnancy BMI median (IQR) 29.7 (25.8 – 33.5) kg/m^2 , BSurg: $n = 99$). Maternal and neonatal outcomes were similar between BSurg and non-BSurg women ($p > 0.05$). However, neonates of women post-BSurg had lower birth-weights (BSurg: 3175 ± 474 g; non-BSurg: 3408 ± 544 g; $p < 0.001$) and fewer had an Apgar score of <7 at 1 min (BSurg: 1%; non-BSurg: 7%; $p = 0.024$). GWG (BSurg: 9.7 ± 7.2 kg; non-BSurg: 10.1 ± 8.8 kg) and adherence to IOM GWG recommendations (BSurg: 27%; non-BSurg: 21%) were similar between groups ($p > 0.05$). Women who gave birth within 18 months of BSurg had lower GWG (BSurg ≤ 18 months: 2.3 ± 3.8 kg; BSurg > 18 months: 11.1 ± 7.0 kg; $p < 0.001$) and more had insufficient GWG (BSurg ≤ 18 months: 82%; BSurg > 18 months: 21%, $p < 0.001$).

Conclusions: Women who have BSurg prior to pregnancy may have similar maternal, neonatal and GWG outcomes to pregnant women matched for age, pre-pregnancy BMI and date of confinement. However, delaying pregnancy for 12–18 months post-BSurg may support adequate GWG.

Contact Author: Tayla Miegel, taylamiegel@outlook.com.au

ID: 252 | What I wish I'd known before I graduated: A qualitative analysis of new graduate reflections

Lana Mitchell¹, Alana Heafala¹, Lauren Williams¹

¹Griffith University

Background: Transition to employment is a topic of interest to dietetics students and graduates but is little studied academically. The Griffith University dietetics graduate outcomes survey follows new graduates for 2 years post-graduation to document their experiences and employment outcomes.

Aim: To explore the advice that graduates in the first 2 years of employment would provide to new graduates and universities.

Methods: Graduates of Griffith University Bachelor of Nutrition and Dietetics 2017–2019 cohorts ($n = 150$) were invited to participate. Purpose-developed online surveys were administered at 12-months and 2-years post-graduation. Qualitative responses from three open-ended items underwent content analysis to identify relevant themes and subthemes.

Results: 89 of the 150 Griffith dietetics graduates completed the 12-month survey (2017: $n = 27/48$; 2018: $n = 37/52$; 2019: $n = 25/50$), with 81 completing the 2-year survey (2017: $n = 31$; 2018: $n = 29$; 2019: $n = 21$). Four key themes were identified: (1) Obtaining work may require persistence and willingness to relocate: while many found the transition to work challenging, in hindsight some would stress less about the transition; (2) Consider all jobs and opportunities but can also be selective: one job often leads to another, apply skills to non-traditional roles; (3) Do what you can to gain knowledge, experience, and mentoring: focus on networking, professional development, volunteering, and attitude; (4) Program and course recommendations: suggested increase practical experiences/placement, mentoring, private practice, and clinical/communication/job application content.

Conclusions: This advice can be used by universities to enhance the preparation of dietetic graduates, and by students and new graduates to strengthen their entry into the workforce.

Contact Author: Lana Mitchell, lane.mitchell@griffith.edu.au

ID: 190 | Role of dietary inflammatory load on cancer treatment outcome

Mitali Mukherjee¹, Shawgi Sukumaran², Michelle Miller

¹Flinders University/Southern Oncology SA/Mani Physiotherapy, ²Flinders University

Background: Significant inflammation is produced as a result of cancer and its treatment. Dietary inflammatory index is associated with increased incidence of cancer as well as overall cancer mortality.

Aim: To determine the impact of dietary inflammatory index scores in oncology patients and its relationship to side effects of cancer treatment.

Methods: Dietary inflammatory index scores in oncology patients were determined using diet history records. Until end of 12 weeks from commencement of treatment, their side effects to therapy were analysed for correlation with Dietary inflammatory index. Platelet to lymphocyte ratio was collected to assess inflammation.

Results: A sample size of 112 patients were included. Preliminary analysis shows that the dietary inflammatory index and energy adjusted dietary inflammatory index scores for 28 nutrients ranged from 4.57 to -3.32 and 4.61 to -1.22 respectively for the cohort included. Preliminary data on side effects shows that 98% of the 101 patients experienced at least one side effect due to

treatment. Final results of correlation between Dietary inflammatory index scores with treatment outcomes will be presented.

Conclusions: These results could provide rationale for development of dietary modifications that could decrease inflammation and subsequently impact on cancer treatment outcomes.

Contact Author: Mitali Mukherjee, mitali.mukherjee@flinders.edu.au

ID: 142 | Are current nutrition policy actions equipped to tackle the food systems problem of ultra-processed foods?

Tanita Northcott¹, Mark Lawrence¹, Christine Parker, Belinda Reeve², Phillip Baker¹

¹Deakin University, ²The University of Sydney

Background: Ultra-processed foods (UPFs) harm human and planetary health, yet sales and consumption continue to rise. The rise of UPFs is a property of today's complex food systems, and calls for a 'food systems' approach to regulate the deeper systems determinants. Systems science and ecological regulation concepts can be applied to examine how nutrition policy actions interact to transform food systems. To date, few scholars have assessed the global food policy landscape from a systems-based and ecological perspective.

Aim: To apply a novel systems-based framework to current nutrition policy actions to examine whether implemented regulatory interventions are congruent with systems-based and ecological regulation approaches.

Methods: This study will use a mixed methods synthesis design, including a policy document analysis of regulatory interventions in various countries.

Outcomes: The primary expected outcome of the study will be to describe and analyse the state of current nutrition policy actions in selected countries across the world, and critically examine how they measure up to an integrated systems-based and ecological regulatory conceptual framework. Preliminary findings suggest that current nutrition policy actions predominantly consider the structural elements of the food system, and tend to under-emphasise other aspects and levels of system function necessary to facilitate transformative change, such as synergies, goals and paradigms.

Conclusions: The preliminary results illustrate the potential to draw on ecological approaches to regulation and systems frameworks to examine how to use regulation more effectively to inform holistic and transformative policy action to halt the rise and attenuate the harms of UPFs.

Contact Author: Tanita Northcott, tnorthcott@deakin.edu.au

ID: 38 | Depression, is it treatable in adults utilising dietary interventions? A systematic review of RCTs

Simone O'Neill¹, Michelle Minehan¹, Catherine Knight-Agarwal¹, Murray Turner¹

¹The University of Canberra

Background: Depression is becoming increasingly prevalent worldwide. The pathophysiology of depression is not entirely understood and is likely to be multifactorial. However, diet offers potential to improve depressive symptomatology.

Aim: To examine whole food or whole diet interventions to treat depression.

Methods: The protocol for this review was registered with PROSPERO (CRD42020210426). Five databases were searched for original research addressing diet as treatment for depression in adult populations. Study quality was assessed using the Academy of Nutrition and Dietetics Quality Criteria Checklist.

Results: Seven studies; with 49 156 participants; met the eligibility criteria. Six of the studies found positive outcomes with depression levels decreasing after dietary intervention. The calculated effect size varied from small (Cohen's $d = 0.32$) to very large (Cohen's $d = 1.82$). The heterogenous nature of the studies limited the synthesis of the data.

Conclusion: Recommendations are provided to enhance future study design and measurement outcomes. Overall, the findings show a positive result for diets that promote an increased intake of fresh produce; wholegrains; low fat dairy and lean protein sources, while also decreasing intake of processed foods and high fat foods.

Contact Author: Simone O'Neill, simone.oneill@canberra.edu.au

ID: 93 | Online nutrition resources for young children - what's out there and who's missing out?

Jacqui Palmer¹, Clare Dix¹, Beatrice Murawski¹, Helen Truby^{1,2}

¹The University of Queensland, ²Monash University

Background: Diet quality is an important contributor to lifestyle disease prevention in young children. Wide-reaching health promotion efforts targeting parents and

carers are required to reduce the prevalence of poor diet quality in young children. 97% of Australian households with young children have access to the internet and as such, online resources could be a suitable method of disseminating healthy nutrition information for children.

Aim: To synthesise existing online resources (i.e., educational materials/programs) targeting children's nutrition (age ≤5), and to identify subgroups that may be underserved, due to a lack of resources or available resources being inappropriate.

Methods: A systematic search of currently available, non-commercial websites using pre-specified search terms in two search engines (Google, Bing) was conducted (September–December 2021). Online resources were included if they were from a reputable source, published in Australia, freely available and targeted nutrition in the under-five population. All types of resources were included (e.g., downloadable factsheets/guides, web content and audio-visual material).

Results: In total, 568 relevant resources were found: 23 for pregnant mothers, 190 for infants, 23 for 2–3 year-olds, and 16 for 4–5 year-olds. Of these, 61 targeted nutrition in the Aboriginal population, 29 in the Pacific islander population, 38 for diverse backgrounds and 7 for low budget.

Conclusions: Many free nutrition resources are available online. However, certain populations are underserved, and few resources are user-friendly. The development of new nutrition resources should focus on co-design with consumers to better address the needs of groups with culturally diverse backgrounds and disadvantaged households.

Contact Author: Jacqui Palmer, jacqui.palmer@uq.edu.au

ID: 83 | Mealtimes in rehabilitation: In-depth exploration of patient's functioning, independence, and care

Alice Pashley¹, Adrienne Young², Emmah Doig¹, Olivia Wright¹

¹The University of Queensland, ²Royal Brisbane & Women's Hospital

Background: Rehabilitation aims to restore a person's function and independence to the highest degree possible to enable participation in meaningful life activities. Mealtimes are a crucial element to enhancing rehabilitation patients' recovery, aiding them with appropriate nourishment, providing psychosocial benefits, and therapeutic opportunities. Currently, little is known about how well mealtimes are planned, structured, and delivered in inpatient rehabilitation units to support a therapeutic experience.

Aim: To answer the question 'How well are mealtimes planned, structured, and delivered to support a therapeutic experience in rehabilitation?'

Methods: Multiple case study design will be employed, utilising mixed methods data collection. This involves data extraction from the medical records to identify documented mealtime care plans, 2 days of mealtime observations using semi-structured audit tool, and semi-structured interviews at two time points (around admission and discharge). Data will be analysed thematically and lexically, using inductive methods. This study expects to evaluate whether current mealtime care practices support therapeutic activities in the rehabilitation setting, to identify rehabilitations inpatients perceived and actual functioning and independence with mealtime-based activities, and to examine the differences in mealtime related functionality, independence, and care across the course of the rehabilitation admission.

Conclusion: The outcomes of this research will highlight current mealtime care practices that support or hinder a therapeutic experience, which will inform how to best deliver mealtimes in rehabilitation to provide care that is aligned with rehabilitation principles.

Contact Author: Alice Pashley, a.pashley@uqconnect.edu.au

ID: 165 | Mediterranean diet principles and quality of life in patients with inflammatory bowel disease

Trent Payne¹, Abigail Marsh¹, Merrilyn Banks², Graham Radford-Smith^{2,3}, Veronique Chachy¹

¹The University of Queensland, ²Royal Brisbane and Women's Hospital, ³QIMR Berghofer

Background: Quality of Life (QoL) in patients with Inflammatory Bowel Disease (IBD) is impacted by symptoms such as diarrhoea, fatigue, rectal bleeding, anxiety, and increased hospitalisation. Treatment of IBD is complex due to the multi-factorial disease pathogenesis. Diet emerges as a modifiable factor to improve QoL. There is paucity of data on the effect of the Mediterranean diet on QoL in IBD.

Aim: To analyse data issued from a randomised controlled trial investigating the effects of Mediterranean diet principles on disease severity, administered by providing 60% of meals, or education and ingredients, compared to healthy eating guidelines.

Methods: 51 participants with IBD were recruited. Dietary intake was evaluated against the Mediterranean Diet Adherence Screener (MEDAS), and QoL was assessed by the Short Inflammatory Bowel Disease Questionnaire (SIBDQ), at baseline and after the 8-week intervention.

Results: The MEDAS and SIBDQ scores increased significantly in both types of delivery compared to baseline values, and to healthy eating (Meals MEDAS: 7 [6–8] to 9.96 [8.1–11.5], $p < 0.00$; Meals SIBDQ: 5.05 [4.4–5.95] to 5.9 [5–6.4], $p < 0.00$; (Education MEDAS: 6.66 [5–8.4] to 10 [8.1–10], $p < 0.00$; Education SIBDQ: 5.05 [4.5–5.9] to 5.6 [5–6.1], $p < 0.05$). The increase in MEDAS correlated significantly with the increase in SIBDQ in the Meals delivery only.

Conclusions: An increase in MEDAS score was associated with an increased SIBDQ score, suggesting the potential of Mediterranean diet principles on QoL in patients with IBD, even when delivered by education. Further research in larger cohorts, and over longer duration is warranted.

Contact Author: Trent Payne, trent.payne@uqconnect.net.au

ID: 231 | Efficacy of an mHealth intervention in childcare services on packing of discretionary foods in lunchboxes

Nicole Pearson¹, Meghan Finch², Rachel Sutherland, Melanie Kingsland¹, Luke Wolfenden, Taya Wedesweiler¹, Vanessa Herrmann, Serene Yoong³

¹HNE Population Health, ²Hunter New England Population Health, ³Swinburne University of Technology

Background: Evidence suggest that lunchboxes of children attending childcare services contain excessive amounts of discretionary foods. The use of mobile health (mHealth) to support parents to pack healthier lunchboxes represents a novel approach to improve child diet in this setting.

Aim: To report on the efficacy of an mHealth intervention to reduce packing of discretionary foods in childcare lunchboxes.

Methods: A single-blind randomised controlled trial was undertaken with 17 childcare services from NSW, Australia. Consenting parents of children aged 3–6 years of age received a ten week program via an existing childcare-parent communication app. The intervention consisted of weekly push notification messages addressing known barriers to packing healthy lunchboxes. Lunchbox contents were measured via photography and weighed food records at baseline and follow up. Parent engagement was measured via an online survey and app analytics. Outcomes include mean kilojoules from discretionary foods and mean serves of discretionary foods packed. An intention to treat analysis was undertaken adjusted for clustering and nutrition related service characteristics and controlling for baseline.

Results: No significant differences in kilojoules from discretionary foods packed (77.84 kJ, -163.49 to 319.18;

$P=.53$) or serves of discretionary foods were detected (0.13, -0.27 to 0.53; $P=0.68$). Only 62% of parents had downloaded the app, and the mean parent viewing rate for messages was 26% (SD 14.9).

Conclusions: The findings indicate that the intervention had a null effect on parent packing of discretionary foods in childcare lunchboxes. Further research into barriers to parent engagement with such an intervention is warranted.

Contact Author: Nicole Pearson, Nicole.Pearson@health.nsw.gov.au

ID: 146 | Austin health patient mealtime experience survey: A valid and reliable tool measuring patient mealtime satisfaction

Dylan Price¹, Kate Furness¹, Serene Yoong¹, Samantha King², Annie-Claude Lassemillante¹, Melina Harris¹, Sumeya Mehicevic¹

¹Swinburne University of Technology, ²Austin Health

Background: Positive patient mealtime experiences are a significant predictor of improved patient outcomes within hospitals. Despite this there is limited existing valid measures that seek to comprehensively measure patient satisfaction as outlined.

Aim: To determine the test re-test reliability and concurrent validity of the Austin Health Patient Mealtime Experience Survey; and to describe the prevalence of mealtime satisfaction amongst patients using the measure.

Methods: The Austin Health Patient Mealtime Experience survey was developed to describe mealtime experience more comprehensively. It consists of 4 domains (Food Quality, Environment, Staff Interactions/Assistance and Food Ordering Systems), and 18 questions with a 5-point Likert Scale (ranging from never to always). From March 2021 until November 2021, the Austin Health Patient Mealtime Experience Survey and the Acute Care Hospital Foodservice Patient Satisfaction Questionnaire (an existing valid measure of patient mealtime satisfaction) was administered across one health service. A second Austin Health Patient Mealtime Experience Survey was readministered with the same patients 3–7 days later.

Results: A total of 149 patients completed the survey with 141 completing both surveys and 104 completed the second survey. The survey showed acceptable concurrent validity ($r = 0.655$, $p = <0.001$) and acceptable test-retest reliability (Cronbach's alpha = 0.713). Food Quality was deemed the domain with the lowest satisfaction with a mean score of 3.94, and the highest performing domain was staff interactions/assistance (4.74).

Conclusions: These results indicate that the survey could appropriately capture mealtime experiences in hospital settings and could be used to inform initiatives.

Contact Author: Dylan Price, 102 972 208@student.swin.edu.au

ID: 162 | Where is preoperative nutrition? Evaluation of elective surgery practice within a tertiary hospital colorectal unit

Tayla Robertson¹, Ra'eesa Doola², Ingrid Hickman²

¹Princess Alexandra Hospital, ²Princess Alexandra Hospital; University of Queensland

Background: Enhanced Recovery After Surgery models are multimodal perioperative care pathways associated with improved surgical outcomes that recommend preoperative malnutrition screening and dietetic intervention for those at risk.

Aim: To evaluate preoperative malnutrition screening, dietetic intervention and weight loss outcomes in patients undergoing elective colorectal surgery, and describe the patient experience with preoperative nutrition information.

Methods: A retrospective chart audit was performed for all patients from Jan 2020–Jul 2021 to determine the percentage of patients who received timely (>7 days preoperatively) malnutrition screening (MST), were identified 'at risk' of malnutrition (% MST ≥2), received dietetic intervention (Y/N) and lost weight prior to surgery (% body weight). Preoperative nutrition experience questionnaires were administered post-surgery in 30 conveniently sampled patients.

Results: 285 patients were audited. 87% had an MST completed preoperatively (61% completed ≥7 days preoperatively). 39 patients (16%) were identified 'at risk' of malnutrition (MST ≥2). Of these, 23% (9/39) received dietetics intervention. Half (86/172) of the patients who had ≥7 days between preoperative screening and surgery, lost ≥0.5 kg with a median (IQR) rate of 1.1 (1.5) % body weight loss per week. 60% (18/30) of patients recalled receiving 'nutrition' information preoperatively with 78% (14/18) receiving it from a nurse or doctor. The information provided was primarily related to bowel preparation and fasting times.

Conclusions: Timely preoperative malnutrition screening and intervention is not routine, with patients experiencing potentially preventable unintentional weight loss. Nutrition information is mostly limited to bowel preparation. Implementation and evaluation of a preoperative malnutrition screening, referral and intervention pathway is needed.

Contact Author: Tayla Robertson, tayla.robertson@health.qld.gov.au

ID: 242 | MoTher, an mHealth system to support women with gestational diabetes mellitus: A spotlight on its use by culturally and linguistically diverse women

Anna Roesler¹, Marlien Varnfield¹

¹CSIRO

Background: Delays in diagnosis and challenges in Gestational diabetes mellitus (GDM) management can lead to serious adverse outcomes. MoTher, a mHealth platform, has been developed to help provide remote care for women with GDM. The platform enables women to record their BGLs, weight, diet and exercise for treating clinicians to access. There is, however, some concern that women of culturally and linguistically diverse (CALD) backgrounds are not engaging with the platform and receiving appropriate care.

Aim: To assess the adoption of MoTher by women of culturally and linguistically diverse backgrounds.

Methods: The study will occur at three Brisbane hospitals that currently use the MoTher platform. All women that have used the MoTher platform for a minimum of 4 weeks, will be included in the study (approximately 2500 women). We will use a regression model to help explain the variance in the use of MoTher. Follow up interviews will be conducted through purposive sampling of women of CALD background to identify facilitators and barriers of MoTher platform use.

Results: It is hypothesised that women of CALD backgrounds will have reduced use of the platform. It is expected that barriers identified will include technology challenges and poor health literacy. Facilitators will include encouragement and education.

Conclusions: From this study we will be able to conclude whether women of CALD backgrounds are using the MoTher platform and the facilitators and barriers of use.

Contact Author: Anna Roesler, anna.roesler@csiro.au

ID: 234 | Using multimethod qualitative research to amplify stories of lived experience of food insecurity

Caitlin Saunders¹, Alison Ward¹

¹Department of Health Tasmania

Aim: To explore the impact of the COVID-19 pandemic on community experiences of food insecurity in Tasmania, by amplifying the voices of those with lived experience of food insecurity.

Methods: Participants shared stories of the challenges they faced accessing food and essential services during

2020–2021. The unusual circumstances of the pandemic necessitated a flexible and creative approach to collecting and analysing data. We used a multi-method approach; collecting data via online questionnaire, focus groups, interviews and self-submitted stories. The different collection methods enabled greater participation from community members. We used a participatory model of data analysis, inviting community sector stakeholders to help researchers draw key themes from the stories. This was followed by a secondary analysis by researchers to finalise themes and develop recommendations for future government response.

Results: Participants spoke of challenges accessing food relief, identifying a need for improvements in volume, variety and nutritional quality of food available. The findings also highlighted emerging community-led solutions, which were often innovative and designed to meet a niche need within a particular community.

Conclusions: By using a multi-method research approach and a participatory model for data analysis, dietitians engaged in a practical way with the community sector and community. The themes and key learnings identified can be used by the Tasmanian Government and our intersectoral partners to guide future work in a collaborative system-based way to build resilience into local food systems in Tasmania.

Contact Author: Caitlin Saunders, caitlin.saunders@health.tas.gov.au

ID: 75 | #Healthpromotion: How dietitians can use social media to positively influence young adult women 18–35 years

Danielle Shine¹, Michelle Minehan¹, Catherine Knight-Agarwal¹

¹The University of Canberra

Background: Social media presents novel, low-cost opportunities to reach, educate and positively influence young adult women (18–35 years) who are one of the largest, most engaged social media populations worldwide. Despite this, research exploring women's social media use is lacking. Specifically, a review of the literature uncovered a dearth of research concerning the viability of social media for health promotion amongst women 18–35 years.

Aim: To understand how young adult women use social media, including the nutrition and health-related content they prefer to view and why.

Methods: Qualitative research was conducted via semi-structured, one-on-one interviews that were audio

recorded and transcribed verbatim. An Interpretative phenomenological approach was employed, given it is concerned with individuals' lived experience and how they make sense of it. Participants were women 18–35 years from Australia, the United States of America, and United Kingdom.

Results: Three themes were identified: authentic people are the most credible social media influencers; social media content must be engaging and easy to understand to capture and maintain attention; selling on social media may dilute authenticity.

Conclusions: There is high potential for social media to support health promotion targeting increased food and health literacy amongst young adult women. This population willingly interacts with social media content, including diet and health-related content, daily. Whilst a social media presence is not a mandatory requirement for dietitians, it could be argued that dietitians have a duty of care to adopt this medium to promote evidence-based information. This would also support mitigation of diet and health-related misinformation perpetuated via social media.

Contact Author: Danielle Shine, u104223@uni.canberra.edu.au

ID: 109 | What are the characteristics of patients accessing the home enteral nutrition program of a specialist cancer hospital?

Jane Stewart¹, Belinda Steer¹, Jenelle Loeliger¹

¹Peter MacCallum Cancer Centre

Background: Home enteral nutrition (HEN) programs support patients in the home setting with eligibility traditionally for tube-fed patients only. Victorian HEN funding guidelines changed in 2020 to also include patients reliant on oral nutrition support (>70% of nutritional requirements).

Aim: To describe the clinical characteristics of cancer patients accessing a specialist cancer hospital HEN program.

Methods: A retrospective audit of HEN eligible patients was conducted for the 2020–2021 financial year. Demographic and clinical data were extracted from a prospective database and analysed using descriptive statistics.

Results: Of the 426 HEN program users (mean age 63 years, 76% male) the majority had head and neck (82%) or upper gastrointestinal cancer (13%). The HEN program grew in patient numbers by 52% from the previous year ($n = 280$, 2019–2020). Fifty nine percent ($n = 252$) received enteral nutrition only, 29% ($n = 123$) oral nutrition only and 12% ($n = 51$) had sequential episodes of oral and enteral nutrition support. Of patients

receiving enteral nutrition, 45% were fed via a percutaneous endoscopic gastrostomy (PEG), 37% via nasogastric tube (NGT), 9% via jejunostomy, 8% via radiologically inserted gastrostomy and 1% via nasojejunal tube. The average time fed via initial PEG was 178 days (SD 105) compared to 58 days (SD 49) for NGT.

Conclusion: Expansion of Victorian HEN funding eligibility and an increase in patient complexity through the cancer centre resulted in substantial HEN program growth. This study provides insights into the workforce and clinical service design required to best support a large cancer-specific HEN program.

Contact Author: Jane Stewart, jane.stewart@petermac.org

ID: 212 | Developing a public health approach to infant feeding for food allergy prevention

Sandra Vale¹, Ingrid Roche², Merryn Netting³, Maria Said⁴, Preeti Joshi, Rhonda Clifford⁵, Dianne Campbell⁶, Sandra Salter⁵

¹National Allergy Strategy, ²Perth Children's Hospital, ³SAHMRI, ⁴Allergy & Anaphylaxis Australia, ⁵The University of Western Australia, ⁶Children's Hospital at Westmead

Background: In response to an increasing incidence of food allergy internationally, there has been a focus on primary prevention of food allergy. Guidelines for infant feeding for allergy prevention have been updated since the release of landmark studies in 2015. The Australasian Society of Clinical Immunology and Allergy (ASCIA) updated their guidelines in 2016.

Aim: To identify a brand, key messages and resources to underpin a public health approach to implementing the ASCIA guidelines.

Methods: A focus group design was used to explore perceptions and opinions of potential brands, infant feeding messages and resources for providing standardised food allergy prevention information.

Results: Seven focus groups were conducted with a total of 39 participants; three with health professionals and four with parents. Content analysis of the focus group transcripts was undertaken. Four slogans and styles of imagery were considered. 'Nip allergies in the Bub' was the most favoured slogan and images of babies with food were most favoured. Participant feedback was sought regarding messages and supporting messages were considered important. Participants were also consulted about useful resources and a website was identified.

Conclusions: Conducting focus groups assisted in the selection of a brand, messages and resources to underpin

a public health approach to implementing the ASCIA guidelines. This study is the first of its kind, in food allergy prevention. Nip allergies in the Bub website – www.preventallergies.org.au

Contact Author: Sandra Vale, sandra@allergy.org.au

ID: 213 | Improving food allergy awareness and management in food service

Sandra Vale¹, Heather Roberts¹, Maria Said², Preeti Joshi, Sally Voukelatos², Ingrid Roche³

¹National Allergy Strategy, ²Allergy & Anaphylaxis Australia, ³Perth Children's Hospital

Background: Australia has one of the highest rates of food allergy in the world, with many food allergies persisting into adulthood. The burden on and complexities for food service providers and dietitians to manage food allergy are therefore increasing. Currently, there is no legislative or accreditation requirement for food service providers to have food allergy policies, protocols or staff training in food allergen management.

Aim: To optimise food allergen management across the community including hospitals, schools, childcare, camps, cafes and restaurants, and other vulnerable populations such as aged care, correctional facilities and mental health facilities.

Methods: Extensive engagement with stakeholders indicated that food service providers require food allergy policies, protocols, management tools and staff training to ensure appropriate food provision for people with food allergies. Stakeholders were also consulted about how to communicate the shared responsibility between the food provider, consumer and those who audit food premises.

Results: Various All about Allergens online training courses were developed in consultation with key stakeholders including the intended end-users. All about Allergens is the first nationally consistent, evidence-based, best-practice, training freely available including a range of supporting resources available through a resource hub. A communication strategy was developed to be conducted through social media channels.

Conclusion: This project has successfully engaged with all key stakeholders including dietitians working in a variety of food service sectors such as hospitals, aged care, correctional facilities, schools and childcare. The communication strategy helps to promote the resources developed and educate about shared responsibility in food allergen management.

Contact Author: Sandra Vale, sandra@allergy.org.au

ID: 86 | Nutrition management for critically ill adult patients requiring non-invasive ventilation: What do we know?

Elizabeth Viner Smith¹, Emma Ridley², Christopher Rayner¹, Lee-anne Chapple¹

¹The University of Adelaide, ²Monash University

Background: Nutrition management is a core component of intensive care medicine. Despite the increased use of non-invasive ventilation for critically ill patients, a paucity of evidence on nutrition management for these patients precludes recommendations for clinical practice.

Aim: To scope and summarise the available literature to guide future research on this topic.

Methods: Database searches of MEDLINE, Embase, Scopus, Web of Science and Google Scholar were conducted to identify original research articles and available grey literature in English from 1990 to 17 November 2021 that included adult patients (≥ 16 years) receiving non-invasive ventilation within an Intensive Care Unit. Data were extracted on the study design, aim, population, nutrition concept, context (location, duration and apparatus used for non-invasive ventilation) and outcomes.

Results: Of 1730 articles, 16 met eligibility criteria and were included. Articles primarily included single-centre, prospective, observational studies. Key concepts included route of nutrition ($n = 8$), nutrition intake ($n = 4$), energy expenditure ($n = 2$), nutrition status ($n = 1$) and nutrition screening ($n = 1$); one unpublished thesis incorporated multiple concepts. Included literature provided no consensus on optimal nutrition route for clinical benefit or valid tool for screening/diagnosing malnutrition. It demonstrated nutrition inadequacy compared to estimated requirements and introduced the concept that energy expenditure may be influenced by ventilation mode.

Conclusions: Few randomised clinical trials that quantify aspects of nutrition management for critically ill patients requiring non-invasive ventilation have been published. Further studies, particularly those focusing on the impact of nutrition during non-invasive ventilation on clinical outcomes, are required to inform evidence-based clinical practice.

Contact Author: Elizabeth Viner Smith, elizabeth.smith@adelaide.edu.au

ID: 45 | How vegetarian diets affect people with or at high risk of cardiovascular diseases: A meta-analysis

Tian Wang¹, Cynthia Kroeger¹, Sophie Cassidy¹, Sayan Mitra¹, Rosilene Ribeiro¹, Shane Jose¹, Andrius Masedunskas¹, Luigi Fontana¹

¹The University of Sydney

Background: Plant-based diets are known to improve cardiometabolic risk in the general population, but their effects on people with or at high risk of cardiovascular diseases remain inconclusive.

Aim: To assess the effect of vegetarian diets on systolic blood pressure (SBP), low-density lipoprotein cholesterol (LDL-C), haemoglobin A1c (HbA1c) and body weight in people with or at high risk of cardiovascular diseases.

Methods: We performed systematic searches in EMBASE, MEDLINE, CINAHL and CENTRAL from inception until 31st July 2021 for randomised controlled trials of vegetarian diet in people with or at high risk (e.g., high blood pressure, high total cholesterol/LDL-C/triglycerides) of cardiovascular diseases, which measured LDL-C, HbA1c or systolic blood pressure. We used a random-effects meta-analysis to assess mean differences in LDL-C, HbA1c, SBP and body weight. The overall certainty of the evidence was assessed using the Grading of Recommendations, Assessment, Development, and Evaluation (GRADE) tool.

Results: Twenty studies involving 1878 participants met inclusion criteria. Four studies targeted people with existing cardiovascular diseases, seven focused on participants with diabetes and nine included people at high risk of cardiovascular diseases. Meta-analyses showed that consuming vegetarian diets decreased LDL-C, HbA1c, and weight by -0.18 mmol/L (95%CI: -0.28 , -0.08), -0.25% (95%CI: -0.43 , -0.06), -3.4 kg (95%CI: -4.6 , -2.2), respectively. GRADE assessment showed a moderate level of evidence for LDL-C and HbA1c reduction.

Conclusions: Consuming vegetarian diets improve LDL-C, HbA1c and weight in people at high risk of cardiovascular diseases. Additional high-quality trials are warranted to explore this diet in people with cardiovascular diseases.

Contact Author: Tian Wang, twan6100@uni.sydney.edu.au

ID: 115 | Dietitians in Australia: The first decades 1929–1950

Beverley Wood¹

¹Deakin University

Background: Australia was amongst the first group of developed countries to appreciate that Dietitians would be an asset, particularly in regard to hospital food services.

Methods: This book is based on historical records and explores how the work of Dietitians began to evolve here from 1929.

Results: The first Dietitians trained overseas or entered the 'Certificate in Dietetics' at the Alfred Hospital (Melbourne) and the Royal Prince Alfred Hospital (Sydney), both set up by invited American Dietitians. These certificates were the usual apprenticeship style courses (food service, diet therapy, education) following various entry pathways (Home Economic Diplomas, Nurse Registration, University Science Degrees) which differed by State. The absence of University Home Science Degrees was an issue. The first Dietary Departments were established at the Royal Melbourne Hospital (1929, Sister Nesta Miller), the Alfred Hospital (1930, Mabel Flanley) and the Royal Prince Alfred Hospital (1936, Edith Tilton). Issues related to entry pathways to training soon commenced and persisted. There was tension between models of dietetics (American generalist, British specialist). Dietetic Associations in both States soon began, along with the Victorian Dietitians Registration Board and the New South Wales Institute of Dietitians. In 1950 the State Associations came together as the Australian Dietetic Council, largely to resolve differences between interstate training standards.

Conclusions: In hindsight, some contemporary issues have their antecedents in these early times. This history is placed in its socio-political context and honours the early Dietitians of Australia who strove so hard in difficult decades to achieve the basic tenets of the modern profession.

Contact Author: Beverley Wood, woodbe4@bigpond.com

ID: 223 | Nutrition information sought on a bariatric surgery online forum

Charlene Wright¹, Brandon Syiem², Jaimon Kelly³, Katrina Campbell⁴, Kyra Hamilton¹

¹Griffith University, ²University of Melbourne, ³The University of Queensland, ⁴Metro North Hospital and Health Service

Background: There are various dietary recommendations in bariatric surgery and understanding patient support needs may help develop education material.

Aim: To explore nutrition related themes, concepts, and support needs generated from bariatric surgery Reddit posts.

Methods: Posts made on a bariatric surgery Reddit community during 2019 were extracted. Eight coding themes were prospectively defined based on prior research and American Society for Metabolic and Bariatric Surgery nutrition guidelines. The encoder Bidirectional Encoder Representations from Transformers was used to generate vector representations for themes and posts. Similarity between theme and post embeddings were scored using cosine similarity (range: -1 [opposing] to 1 [similar]). Leximancer was used to automatically generate a list of themes and concepts assisting with triangulation and identification of additional themes.

Results: There were 2096 posts extracted. Themes with the highest similarity scores from Bidirectional Encoder Representations from Transformers included 'Navigating the liquid diet' and 'Following guidelines in new/challenging situations'. The theme 'Products/practices for adhering to guidelines' was lacking, which is inconsistent with prior research. Challenges and concerns with intuitive eating, food addiction, and grazing were shared. Generated themes and concepts in Leximancer were consistent with Bidirectional Encoder Representations from Transformers. The theme 'Weight' had the highest hits ($n = 2444$), and 'Protein' received 1296 hits. A notable theme was 'Anyone', where users asked questions such as 'does anyone have experience with'.

Conclusion: Users sought nutrition information on the bariatric surgery Reddit community. Divergent findings suggest various social media platforms may be used for different purposes. Authors generated a list of topics to guide nutrition education material.

Contact Author: Charlene Wright, charlene.wright@griffithuni.edu.au

ID: 192 | Exploration of food insecurity amongst university students during the COVID-19 pandemic

Janine Wright¹, Rebecca Ward¹, Blake Lawrence¹, Deborah Kerr¹, Christina Pollard¹

¹Curtin University

Background: Preliminary studies show that the COVID-19 pandemic is exacerbating the rate of food insecurity in Australia. University students, a traditionally vulnerable group, were thought to be at risk of increased food insecurity due to employment loss and, additionally for international students, that Australian government relief funding did not include them.

Aim: To assess prevalence and predictors of food insecurity in university students during the COVID-19 pandemic (2020 period).

Methods: A cross-sectional online survey (available 20 July to 25 September 2020) was advertised to current university students aged over 18 years. It incorporated the 18-item USDA Household Food Security Survey Module and socio-demographic questions. Survey data were coded and scaled as per the USDA Guide to Measuring Household Food Security and analysed using univariate and multivariate logistic regression.

Results: A total of 219 students completed the survey. Of the respondents 48.2% were categorised as experiencing food insecurity, either with or without hunger. After adjustment for socio-demographic variables, international students ($n = 104$), had ten times greater odds of being food insecure compared with domestic full time students (AOR 10.289; $p = <0.001$; CI: 2.864, 36.968).

Conclusions: These results found high prevalence of food insecurity experienced by university students, during COVID-19 pandemic (2020 period). International students were at significantly higher risk than their domestic counterparts. Policy changes are required to provide support to students who are vulnerable to food insecurity, with international students warranting additional consideration as a highly vulnerable group.

Contact Author: Janine Wright, j.wright@Curtin.edu.au

ID: 66 | How is local food defined in Australia?

Ellen Wynn

Background: As health and sustainability targets become more common in the literature and media, the focus is increasingly being placed on consumers to drive changes in food retail practices by 'acting with their dollar'. Local food has been proposed as a sustainable alternative to conventional food however researchers have struggled to agree on what exactly local food is. This leaves the space open for retailers to apply their own descriptions and claims of health and sustainability to local food products, potentially making purchase decisions confusing or misleading for the consumer.

Aim: To define local food in Australia.

Methods: A scoping review is proposed to identify current descriptions of local food in Australia through existing research.

Results: It is hypothesised that there will be no single agreed definition of local food in Australia and that definitions will vary largely between actors (e.g., retailer, consumer, producer, government), and geographical location/characteristics (e.g., state, growing region).

Conclusions: The proposed scoping review is the first of a series of reviews regarding local food purchasing in

Australia. It forms the basis for a larger project seeking to determine if there is a place for local and sustainable fruit and vegetable purchases within the dominant food retailers of Australia. The review will provide the data and information on which to form qualitative interview questions which will then be used to explore the values, attitudes, and behaviours of Australian consumers regarding local and sustainable fruit and vegetable purchasing.

Contact Author: Ellen Wynn, ellen_wynn@icloud.com

ID: 204 | The highs and lows of developing culturally diverse Yhunger recipes during Covid-19

Rowena Yamazaki¹, Eloise Le Compte²

¹Sydney Local Health District, ²NSW Refugee Health Service

Background: Yhunger is a capacity building program for the youth sector and assists marginalised young people, 12–25 years old, including refugee and refugee-like youth, to develop food and physical activity skills. During COVID-19, Yhunger's experiential 'learning by doing' approach extended to virtual spaces.

Aim: To increase the range of recipes in the Yhunger cookbooks that were culturally inclusive and improve the cookbooks' relevancy with refugee and refugee-like youth. We hypothesised this would improve Yhunger program reach and implementation in refugee youth health, settlement and education services.

Methods: Recipe development transitioned from face-to-face to remote due to the pandemic. Well regarded local cooks in key communities were contacted on the phone as desktop research for traditional recipes is limited. Recipes were identified and trialled intensively to describe methods and quantify ingredients. They were analysed on costs, ease of preparation, alignment with the Australian Dietary Guidelines and appeal to young people. COVID-19 restrictions closed schools and settlement services, limiting youth participation.

Results: Six new recipes are included in the cookbooks and will feature on the Yhunger website: 2 Iranian dolmas, Aleppo omelette, Iraqi fattoush, Congolese stew, and Karen congee.

Conclusions: Public health orders had a direct impact many refugee youth and their families in Sydney, including their sense of belonging, cultural practices and food. Additionally the impact on the workforce further made co-production more challenging. Collaboration, resilience, and agility sustained the project.

Contact Author: Rowena Yamazaki, rowena.yamazaki@health.nsw.gov.au

ID: 9 | Exploring the home enteral nutrition service at a tertiary teaching hospital in New South Wales**Maya Young¹**, Rania Liaros², Anne-Therese McMahon³¹Hunter New England Local Health District, ²South Eastern Sydney Local Health District, ³University of Wollongong**Background:** Australian home enteral nutrition trends remain unknown as a national framework and database is absent.**Aim:** To explore a dietitian-led home enteral nutrition service against the New South Wales Agency for Clinical Innovation Home Enteral Nutrition Guidelines and to develop recommendations for improvement by exploring patient experiences.**Methods:** A two-year retrospective audit of home enteral nutrition patient medical records ($n = 252$), and a cross-sectional experience survey of current home enteral nutrition patients ($n = 50$) at a New South Wales tertiary teaching hospital was conducted.**Results:** Audit analysis showed the mean age of home enteral nutrition patients was 74.2 ± 15.3 SD, with 91.6% of patients using oral nutrition support. Only 23.1% of tube feeding and 2.4% of oral nutrition support patients were seen within the recommended one to 2 week initial assessment timeframe, and 90.5% of patients were reviewed every three to 6 months or earlier, as per the Agency for Clinical Innovation Guidelines. The home enteral nutrition services were rated positively but the delivery (over the phone, face-to-face or a combination) influenced patient experience.**Conclusions:** These findings show inconsistencies with implementation of home enteral nutrition services and the Agency for Clinical Innovation Home Enteral Nutrition Guidelines, as well as highlighting the impacts of home enteral nutrition service delivery on patient experience. Both findings warrant further research.**Contact Author:** Maya Young, maya.young_ship@hotmail.com.**ID: 120 | Evaluating the online delivery of the Better Health Program—A study protocol****Diana Zhu¹**, Zoe Davidson^{1,2}, Simone Gibson¹, Laura Marsh³, Madeline Freeman³, Teagan Knight³¹Monash University, ²Murdoch Children's Research Institute & The Royal Children's Hospital, ³Better Health Company**Background:** The online Better Health Program (o-BHP) is a 10-week family-based program to promote healthy behaviour changes, using online modules on healthy eating and physical activity, phone coaching calls, email/SMS communication and incentives. The program, delivered by Better Health Company, is based on evidence-based approaches in nutrition, physical activity, and behaviour change, that has been successfully delivered and evaluated in-person in Australia for over a decade.**Aim:** To evaluate the impact of the o-BHP on body mass index (BMI), health behaviours, and quality-of-life in children aged 7-13 years who are above a healthy weight. It will explore the experience of participants (children, parents/caregiver) partaking in the program, including barriers and enablers to successful program engagement and/or completion.**Methods:** This pragmatic randomised control trial aims to recruit 118 participants ($n=59$ intervention group, $n=59$ in a wait-listed control group) in Victoria to complete the o-BHP. Outcomes will be assessed pre-program and immediately, 6-months, and 12-months following program completion. Semi-structured interviews will be conducted with interested participants at 3-months follow-up, to collect qualitative data on the participants' experiences whilst participating in the o-BHP.**Results:** Primary outcomes include changes in BMI z-score, weight, waist circumference, dietary intake, physical activity level, and quality-of-life. Secondary outcomes include identified barriers and enablers of program completion/engagement and common features of participants' experiences of the o-BHP.**Conclusions:** This research will provide insight on scalable e-health approaches for childhood obesity, inform future family-based behavioural change programs, and identify program features influencing short- and long-term program effectiveness.**Contact Author:** Diana Zhu, diana.zhu@monash.edu

AUTHOR INDEX

- Abbey K 14, 64
 Abdul M 28, 69
 Adams A 42
 Adams J 71
 Agnew D 22
 Allman-Farinelli M 57, 64
 Almond H 78
 al-Tamimi K 69
 Anastasiou K 6
 Andersen S 56
 Anderson A 6
 Anderson R 7
 Ang K 82, 83
 Ang T 58
 Arestides T 17
 Armstrong E 7, 12
 Ayre S 7
 Bacon R 10
 Baguley B 36
 Bailey S 76
 Baker P 6, 53, 88
 Baldwin C 25
 Ball L 8, 16, 53
 Banks M 59, 83, 89
 Barber C 17
 Barker L 6, 31, 34
 Barnes C 67
 Barrington V 30, 41
 Barry J 8
 Bartrim K 8
 Batchelor F 8
 Bauer J 56
 Baumgartner L 7
 Baur L 27
 Bayles L 67
 Beaumont A 70, 72
 Bebbington K 25
 Beck E 33, 64
 Begley A 55
 Bell J 47
 Bell K 20, 49
 Bell L 45
 Bella AD 59
 Bennett B 28
 Bennett C 17, 75
 Bennier T 70
 Benson C 83
 Bergmeier M 84
 Bialocerkowski A 42
 Biddulph C 70
 Billich N 9, 71
 Birtles N 61
 Black L 39, 55
 Blair M 9
 Blake M 10
 Blyth F 37
 Boelsen-Robinson T 10
 Booth N 60
 Borody T 73
 Borowski A 10
 Bosker J 32
 Boushey C 26, 51
 Boyce S 17
 Bramley A 10
 Bray P 9, 71
 Breen E 11, 71
 Breik L 31
 Brennan L 52
 Brickley B 44
 Brighton A 11
 Broinowski G 72
 Brookes I 74
 Brooks J 7, 12
 Brough M 67
 Brown L 12, 21, 60, 78
 Brown R 58
 Brown T 56
 Brown V 31
 Bryant L 13
 Bucci L 36
 Burke M 67
 Burrows J 12
 Burstow M 77
 Butler A 37, 43
 Byrne R 7, 50, 79
 Byrne S 52
 Byrnes A 13, 24, 67
 Cahill M 67
 Cairns A 9
 Caixinha M 58
 Caldwell B 52
 Cameron A 10
 Campbell D 54, 93
 Campbell K 41, 95
 Capra S 14, 64
 Cardoso BR 58
 Carol BJ 35
 Carroll K 9, 71
 Carty D 70, 72
 Cassidy S 94
 Catrice A 8
 Cavanagh J 73
 Cave D 14, 75
 Cecil J 8
 Chachy V 89
 Chai LK 20, 76
 Chan HY 56
 Chan KI 26
 Chan V 64
 Chandler S 37, 43
 Chapman C 14
 Chapman M 58
 Chapple L-a 58, 94
 Charlton K 57
 Charlwood M 14
 Chau K 72
 Cheng H 63
 Cheng T-j 51
 Cheung KS 26
 Chittleborough E 15
 Chong FFM 82, 83
 Christy N 42
 Ciciulla D 15
 Cinar S 30
 Clancy A 73
 Clark D 13, 24
 Clark P 16
 Clifford R 93
 Colega M 82, 83
 Collins J 74
 Collins K 30
 Collins P 47
 Compte EL 96
 Conti J 66
 Cook C 73
 Cook N 74
 Correa-Velez I 23
 Cottrell R 59

- Coveney J 43
Cox D 31
Cox G 18
Cox L 20
Cronin K 7
Crosby N 25, 74
Crowley E 12, 78
Cruickshank D 16, 83
Cullen H 17
Cumming RG 37
Cuthbert K 76
Cutmore C 85
Dahliwal S 26
Dalton S 17
Daly A 39
Daly RM 36, 58
D'Arcy A 32
Dart J 17, 75
Davidson A 38
Davidson Z 9, 71, 97
Davis D 82
Davis E 25
Davis S 18
DCosta S 18
de Jersey S 86
de Melo PR 6, 53
de Valle K 9, 71
Deane A 58
Delaney C 46
Delbridge R 15, 66
Desbrow B 14
Diab Y 19
Dickie S 19
Dickinson K 20
Dix C 23, 79, 88
Doherty E 67
Doig E 89
Donahue K 37, 43
Doola R 46, 61, 91
Doolan A 20
Doran N 8
Downie O 55, 75
DSouza N 58
Dugmore J 20
Duncanson K 21, 60
Dunlop E 39
Durham J 23
Dux C 45
Earle R 21
Edbrooke L 36
Ekberg S 80
Ellick J 42, 75
Elliott A 20, 37, 43
Elmi Y 24, 52, 63
Eltahir N 23
English C 67
Erku D 34
Evans M 9, 71
Farletti R 76
Farmer J 52
Farquhar M 49
Farrar M 9
Farrugia E 76
Ferns J 78
Ferrie S 79
Finch M 67, 90
Fisher E 21
Fisher K 60
Fitzgerald M 36
Flower C 22
Fontana L 94
Forsyth A 10, 22
Fournier P 25
Fox B 30
Foyster M 30
Francis J 37, 43
Freeman M 97
Freeman W 54
Furness K 90
Gallegos D 20, 23
Garcia D 59
Gardner C 45
Garnett S 27
Gasparini E 84
Gebert S 17
George E 58
Gibbs C 60
Gibson S 9, 29, 97
Giles A 23
Gingell T 23
Glen K 13, 24
Goldsworthy L 35
Golley R 31, 40, 43, 45
González MÁM 29
Goodman A 34
Goodwin D 74
Grady A 78
Grafenauer S 13, 27, 44
Gray R 67
Green T 45
Griffin H 7, 12
Griffin S 77
Grinter K 54
Gulyani P 24, 52, 63
Gunaratne A 73
Gunton J 18
Gupta S 24
Guthrie T 86
Hackett K 32
Hadjikakou M 6
Hall A 28
Hamilton K 53, 95
Han C 25, 46
Handelsman DJ 37
Hanham J 74
Hanna M 44
Hannan-Jones M 85
Harcourt B 81
Harray A 25, 26, 74
Harris H 7
Harris M 90
Hart J 77
Hart L 52
Hawthorn C 20
Hay M 29
Hay P 52, 66
Heafala A 87
Healy JD 26, 73
Heaney S 11, 12, 78
Hendrie G 6
Herbert J 39
Herrmann V 90
Heruc G 52
Herwerden LV 28, 69
Hiatt J 59
Hickman I 34, 41, 91
Hill J 41, 46, 61
Hirani V 37
Ho ICH 26
Hoare J 27
Hoare S 39
Holland S 9
Holloway M 30
Holyday M 34
Hornung C 54
Houston L 51
Howse E 53
Hughes J 27
Hughes V 37, 43
Hunter S 56
Huxtable S 86
Hwa OS 79
Imad N 28, 78
Ingabire A 28
Ireland M 79
Irwin C 14
Jackson K 22, 77
Jagasia N 80
Jamieson J 29, 33

- Jani R 29, 79, 82
 Javier K 80
 Jebeile H 27
 Jeffery E 55
 Jennings B 80
 Johnson B 40, 56
 Johnston L 80
 Jones A 30
 Jones M 30
 Jones T 25
 Jorgensen P 54
 Jose L 81
 Jose S 94
 Joshi P 60, 93
 Kachoyan G 30
 Kaegi K 37, 43
 Kang W 31
 Kashef S 31
 Keefe A 32
 Keenan S 78
 Kelaart A 31, 45
 Kellett J 10
 Kelly H 37, 43
 Kelly J 34, 41, 95
 Kennedy R 71
 Kennewell S 32, 81, 82
 Kent L 17
 Kenway D 56
 Kerr D 26, 35, 51, 55, 95
 Khan H 61
 King S 90
 Kingsland M 90
 Kirsten W 48
 Kiss N 36, 37, 43
 Kissock K 33
 Knight T 97
 Knight-Agarwal C 59, 73, 79, 82, 88, 92
 Kocanda L 11
 Koplin J 15
 Kornberg A 9, 71
 Kovacic B 33
 Kroeger C 94
 Krois N 27
 Kwan TK 82, 83
 Kydd J 34
 Lai JS 82, 83
 Lai R 77
 Laing E 70, 72
 Lam CYN 28
 Lam L 56
 Lam SCW 34
 Lamaro T 37, 43
 Lambert K 69, 72
 Lambert M 83
 Lane K 37, 43
 Lange K 58
 Lassemillante A-C 90
 Law L 34, 41
 Lawrence B 95
 Lawrence M 6, 19, 38, 53, 88
 Le L 35
 Le Couteur DG 37
 Lee A 54, 84
 Leemaqz S 45
 Leeson J 35
 Leonard A 78
 Lesslie F 30
 Liaros R 36, 84, 97
 Lim SC 82, 83
 Lindeback R 9
 Lister N 27
 Lithander FE 39
 Little A 78
 Littlewood R 21, 23
 Liu M 63
 Liu Q 48
 Livingstone K 20
 Lloyd L 62
 Loeliger J 36, 37, 43, 72, 92
 Love P 79
 Low S 82
 Lucas R 39
 Lum M 28
 Luong R 37
 Luscombe G 21
 Lymbouris M 17
 Lyons-Wal P 17, 33
 Maccana C 7
 Macchia KL 27
 MacDermott P 38
 MacDonald-Wicks L 67
 MacDonell S 62
 Machado P 19, 38, 53
 Mackenzie-Shalders K 28, 38
 MacLaughlin H 85
 Maguire S 52
 Maher J 70
 Mahoney D 67
 Makrides M 45
 Mallan K 79
 Man VH 51
 Mandoh M 39
 Mannino A 39
 Manson A 40
 Mantzioris E 22, 85
 Marchese L 20
 Marko S 65
 Marrollo T 40
 Marsh A 89
 Marsh L 97
 Marshall K 41
 Masedunskas A 94
 Masel P 47
 Matthews-Rensch K 85
 Matwiejczyk L 40
 Matwiejczyk M 70
 Mauch C 45
 Mayr H 34, 41
 McAuley E 85
 McCormack J 42
 McCoy S 42
 McInnes E 63
 McIntosh R 37, 43
 McKechnie R 23
 McKenna L 10
 McMahan A-T 36, 97
 McMahan J 63
 McMaster C 66
 McPherson M 81
 McRae P 67
 McWilliam V 15, 54
 Mehicevic S 90
 Mei IVD 39
 Meloncelli N 7
 Melton R 86
 Menezes M 9
 Menzel K 28
 Mete R 17
 Mhaskar K 29
 Middleton G 43
 Miegel T 86
 Milesi G 44
 Miller E 67
 Miller M 25, 46, 87
 Minehan M 59, 88, 92
 Ming-chun Law C 51
 Minniecon D 61
 Mitchell L 9, 44, 53, 65, 87
 Mitra S 94
 Morgan K 45, 85
 Morgillo S 45
 Moumin N 45
 Moyle W 8
 Mudge A 59, 67
 Muhlhausler B 85
 Mukherjee M 46, 87
 Munro J 76
 Murawski B 79, 88

- Murray E 46, 61
Murray K 23
Musgrave-Takeda M 63
Myers F 20
Myers M 6
Naganathan V 37
Nakeeb FA 69
Nalatu S 21
Nathan N 28
Naumovski N 79
Neal K 69
Neale E 33, 48, 51
Neaves B 45
Nelson C 14
Ness S 47
Netting M 40, 45, 54, 60, 93
Nevin A 47
Ng A 52, 63
Ng BL 58
Ng HME 48
Ng T 30
Nicdao M 72
Nikodijevic C 48
Northcott T 88
O'Brien K 48
Olufson H 42
O'Neill S 49, 73, 88
Ortado E 34
O'Shea M-C 49, 50, 65
O'Sullivan T 17, 33
Palermo C 9, 17, 29, 49, 50, 66
Palmer J 50, 79, 88
Palmer M 38, 41, 77, 86
Panagiotakos D 29
Parker A 8
Parker C 88
Partridge S 39
Pashley A 89
Patterson A 67
Patterson K 43
Patterson P 44
Payne T 89
Pe E 23
Pea J 51
Peak R 67
Pearson N 28, 90
Peeters A 10
Perrett K 54
Peters R 15
Phillips M 39
Piya M 52
Poelman A 45
Pollard C 26, 95
Ponsonby A-L 39
Porteous H 86
Porter J 74
Power G 67
Price D 90
Price J 30
Probst Y 48, 51
Proud D 19
Pulker C 73
Purcell L 38
Puskarica J 48
Puskas C 36
Quade K 37, 43
Quin J 52
Radford-Smith G 89
Ralph A 52
Rangan A 13, 37, 44, 48, 64
Rattray M 54
Rawat P 24, 52, 63
Rayner C 94
Rechenber K 62
Reeve B 88
Reidlinger D 18, 32, 38
Ribeiro R 37, 94
Ridley E 94
Riesenberg D 10
Rigby R 8, 44, 53
Robbins L 30
Roberts A 25
Roberts H 60, 93
Roberts K 60
Roberts S 14, 54, 83
Robertson E 6
Robertson T 91
Roche I 54, 60, 93
Roesler A 91
Rogers A 55, 75
Rogers G 49, 50
Ross L 42, 77, 85
Russell R 55
Rutherford S 42
Ryan M 9, 71, 72
Said M 54, 60, 93
Salehi N 62
Salter F 55
Salter S 93
Saunders C 91
Savill H 34, 41
Scott A 56
Sedgman M 17
Segon B 56
Sekula J 65
Sharma Y 25
Shen LR 62
Sherriff J 39
Shi Y 57
Shine D 92
Shi-po Poon S 51
Shivappa N 39
Shoesmith A 28
Shoneye C 26
Simkiss L 37, 43
Simmance N 37, 43
Singh MC 51
Singh S 80
Singh U 55
Slater S 6
Slattery A 30
Smeltzer M 38
Smith D 17
Smith EV 94
Smith G 25
Somerset S 82
Soriano V 15
Sowerby B 9
Speer C 48
Spokes K 17
Squires K 11, 12
Staudacher H 50
Steer B 70, 92
Stewart G 57
Stewart J 36, 37, 43, 92
Stokes-Parish J 18
Stonestreet J 16
Strodl E 77
Sukumaran S 46, 87
Sulemani K 84
Sullivan K 50
Summers M 58
Sutherland R 90
Swan I 30
Swan W 37, 43
Syiem B 95
Takito MY 82
Tam K-h 51
Tan C 80
Tan S-Y 48, 58
Tapsell L 64
Thompson C 17
Tobiano G 63
Toohey K 17
Tottingham A 59
Treleaven E 59
Trobe S 52
Truby H 9, 55, 71, 75, 88
Tsiampalis T 29

- Tuck C 76
Turnbull F 34
Turner M 88
Turon H 67, 78
Urbi B 62
Urquhart L 11, 12, 60, 78
Utter J 32, 65, 69
Valavanis J 17
Vale S 40, 54, 60, 93
van der Pols J 50, 80
Vardy J 80
Varnfield M 91
Vidgen H 61
Villani A 85
Villani J 81
Villano D 9, 71
Vincze L 86
Vivanti A 46, 61, 62
Volders E 6
Voukelatos S 54, 93
Wai J 58
Waite LM 37
Walker J 21, 23, 76
Wallen M 34
Wallis A 52
Walters M 62
Walton K 17, 30
Wan CS 24, 52, 63
Wang L 64
Wang T 94
Ward A 91
Ward R 95
Warner M 32
Webb P 80
Wedesweiler T 90
Weinel L 58
Wheeler M 64
White M 7, 49
Wilkinson S 55, 75
Williams E 44
Williams G 64
Williams L 16, 44, 49, 50, 53, 87
Williams Tchen AJ 52
Wilson A 5, 15, 66
Wilson M 10
Wingett A 61
Wohling T 37, 43
Wolfenden L 67, 78, 90
Woo EZ 51
Wood B 94
Woods J 19
Woodward C 31
Wright C 95
Wright H 65
Wright J 51, 95
Wright O 75, 89
Wylie S 65
Wynn E 66, 96
Wyse R 78
Xu J 48
Yamazaki R 96
Yang WH 58
Yang Y 66
Yaxley A 25
Yew SIS 79
Yew YW 79
Yiu E 71
Yoong S 28, 67, 78, 90
Young A 13, 24, 42, 59, 67, 89
Young M 36, 97
Yu VMW 26
Zacharia K 67
Zadow G 18
Zarnowiecki D 31, 45
Zhao Y 55
Zhu D 97
Zhu F 35, 51