



ICDAM 2023 SYMPOSIA

Symposium 1

FOOD CONSUMPTION AWAY FROM HOME: CHALLENGES AND METHODS DEVELOPMENT TO IMPROVE ITS MEASUREMENT

Tuesday 27 June | 10:15-12:15

Location: Concert Hall Chair:

Edwige Landais

Away-from-home food consumption, usually associated with poorer quality diet and consequently with health impairment, represents an important part of people's diet worldwide. This particular behaviour is quite challenging to assess and thus, this symposium will discuss some of the associated challenges and will present initiatives to better consider and measure away-from-home food consumption.

Adeeba Ishaq¹, Eric Verger², Mike Sharp³, Sandra Crispim⁴, Edwige Landais²

¹Food and Agriculture Organization (FAO), ²French National Institute of Research for sustainable Development (IRD), ³Pacific Community,

⁴Federal University of Paraná

S01.01 FOOD CONSUMED AWAY FROM HOME IN HOUSEHOLD CONSUMPTION AND EXPENDITURE SURVEYS: DATA COLLECTION, AND DATA PROCESSING CHALLENGES

Adeeba Ishaq¹

¹Food and Agriculture Organization of the United Nations

Food consumption data collected in household surveys are being used for producing consumption statistics. Worldwide different survey designs exist to collect data on food consumed away from home (FCAH), which poses challenges in data processing. Improving FCAH survey designs based on existing data collection guidelines is of utmost importance for producing reliable consumption estimates.

S01.02 STUDY PROTOCOL: SURVEY EXPERIMENT TO IMPROVE DATA COLLECTION AND ESTIMATION OF FOOD CONSUMPTION AWAY FROM HOME IN SAMOA

Michael Sharp¹, Nathalie Troubat¹, Lilianetelani Hennemann², Toga Raikoti¹, Andrea Borlizzi¹, Sandra Crispim³, Solene Bertrand¹, Maïwenn Moreau¹, Bertrand Buffiere¹

¹Pacific Community (SPC), ²Samoa Bureau of Statistics, ³Universidade Federal do Paraná

Food consumed 'away from home' (FAFH) is an important component of modern diets. We propose an experiment to assess the cost of one-calorie method against a benchmark to estimate the nutrient composition of FAFH. The experiment is incorporated into a nationally representative household survey in which FAFH consumption data are collected using visual aids and a highly monitored individual diary.

S01.03 ENHANCING THE COLLECTION OF INFORMATION ON FOOD CONSUMED AWAY FROM HOME BY DEVELOPING SPECIFIC MODULES FOR HOUSEHOLD LEVEL SURVEYS: EXPERIMENTAL EVIDENCE FROM VIETNAM AND BURKINA FASO

Eric Verger¹, Edwige Landais¹, Jérôme Somé², Mai Truong³, Nga Hoang³, Yen Thao³, Chris Béné⁴, Raphaël Pelloquin¹, Elodie Maître d'Hôtel¹

¹IRD, ²Institut de Recherche en Sciences de la Santé, ³National Institute of Nutrition,

⁴International Center for Tropical Agriculture

The purpose of this study was to develop, field-test and validate individual-level survey modules in comparison with data from three non-consecutive 24-hour dietary recalls in different settings (urban, peri-urban and rural) in Burkina Faso (n=1398) and Vietnam (n=917) to adequately describe the economic and nutritional importance of food consumed away from home.

S01.04 IMPROVING DATA COLLECTION AND DATABASES IN INDIVIDUAL FOOD CONSUMPTION SURVEYS TO ESTIMATE FOODS CONSUMED AWAY FROM HOME: CASE STUDIES IN BRAZIL AND IN THE CARIBBEAN

Sandra Crispim¹, Ana Fonseca², Débora Silva¹

¹Federal University of Paraná, ²University of Campinas

This presentation seeks to foster the improvement of data collected in individual food consumption surveys to estimate foods eaten away from home. To ensure the good quality and comparability of data, the use of specific away-from-home food descriptions should be considered consistently, along with the consideration that respondents will not always be able to provide some food consumption details.

Symposium 2

ASSESSING ADHERENCE TO THE 2018 WORLD CANCER RESEARCH FUND (WCRF)/ AMERICAN INSTITUTE FOR CANCER RESEARCH

Tuesday 27 June | 10:15-12:15

Location: Classroom FG-042

Co-Chairs: Marissa Shams-White & Giota Mitrou

This symposium will describe the development of the 2018 WCRF/AICR Score to assess adherence to WCRF/AICR Cancer Prevention Recommendations. Operationalization of the Score in UK and US cohort studies and its association with cancer risk will be presented, as well as methodological adaptations. The development and validation of a new screener for use in clinical settings will also be introduced.

Marissa Shams-White¹, Fiona Malcomson², Alice Chaplin³, Giota Mitrou⁴

¹National Cancer Institute, National Institutes of Health, ²Newcastle University, ³Balearic Islands Health Research Institute, CIBEROBN,

⁴World Cancer Research Fund International

S02.01 THE WORLD CANCER RESEARCH FUND (WCRF)/AMERICAN INSTITUTE FOR CANCER RESEARCH (AICR) CANCER PREVENTION RECOMMENDATIONS AND THE DEVELOPMENT OF THE 2018 WCRF/AICR SCORE

Marissa Shams-White¹, Nigel Brockton², Panagiota Mitrou³, Dora Romaguera⁴, Lisa Kahle⁵, Jill Reedy¹

¹National Cancer Institute, National Institutes of Health, ²American Institute for Cancer Research,

³World Cancer Research Fund International, ⁴Balearic Islands Health Research Institute (IdISBa), University Hospital Son Espases, ⁵Information Management Services, Inc.

In 2018, the WCRF/AICR published ten evidence-based, lifestyle Cancer Prevention Recommendations to reduce risk for cancer and related health outcomes. This presentation will give an overview of the Recommendations; describe the development of a standardized scoring system to assess adherence, the 2018 WCRF/AICR Score; and provide guidance for its application in research at the population level.

S02.02 OPERATIONALISATION OF THE 2018 WCRF/AICR SCORE IN THE UK BIOBANK PROSPECTIVE COHORT STUDY AND CHARACTERISTICS OF PARTICIPANTS ACCORDING TO SCORE

Fiona C Malcomson¹, Solange Parra-Soto², Liya Lu¹, Frederick Ho², Aurora Perez-Cornago³, Marissa Shams-White⁴, Jill Reedy⁴, Moniek van Zutphen^{5,6}, Ellen Kampman⁵, Renate Winkels⁵, Giota Mitrou⁷, Martin Wiseman⁷, Dora Romaguera⁸, Carlos Celis-Morales^{2,9}, Linda Sharp¹, John C Mathers¹

¹Newcastle University, ²University of Glasgow, ³University of Oxford, ⁴National Cancer Institute,

⁵Wageningen University & Research, ⁶Radboud University Medical Center, ⁷World Cancer Research Fund International,

⁸Instituto de Salud Global de Barcelona (ISGlobal), ⁹University Católica del Maule

This presentation will describe the operationalisation of the 2018 WCRF/AICR Score in the UK Biobank prospective cohort study, which recruited >500,000 individuals aged 37-73 years between 2006 and 2010, including methodological considerations and challenges encountered, and the creation of an 'abbreviated score'. Patterns of adherence scores across socio-demographic subgroups will be presented.

S02.03 APPLICATION AND METHODOLOGICAL EXAMINATION OF THE 2018 WCRF/AICR SCORE AND CANCER RISK AND MORTALITY IN THE NIH-AARP DIET AND HEALTH STUDY

Marissa Shams-White¹, Elizabeth Thompson², Nigel Brockton³, Panagiota Mitrou⁴, Ariella Korn⁵, Lisa Kahle⁶, Raymond Carroll², Jill Reedy¹

¹National Cancer Institute, National Institutes of Health, ²Texas A&M University, ³American Institute for Cancer Research,

⁴World Cancer Research Fund International, ⁵RAND Corporation, ⁶Information Management Services, Inc.

This talk will present findings on the associations between the 2018 WCRF/AICR Score and cancer risk and mortality in the U.S. NIH-AARP Diet and Health Study. Methodological changes to the Score will also be explored, including the impact of incorporating weightings for each Score component, using a continuous point scale in place of fully discrete cut-points, and revising cut-point values.

NUTRI S-CAN: A NOVEL SHORT SCREENER TO EVALUATE ADHERENCE TO THE 2018 WCRF/AICR CANCER PREVENTION RECOMMENDATIONS

Alice Chaplin¹, Marissa Shams-White², Jill Reedy², Panagiota Mitrou³, Nigel Brockton⁴, Adela Castelló⁵, Mar Nafría⁶, Elena Rayó⁶, Marga Morey⁶, Lara Prohens⁶, Albert Sesé⁷, Dora Romaguera¹

¹*IdISBa; CIBEROBN*, ²*National Cancer Institute*, ³*World Cancer Research Fund International*,

⁴*American Institute for Cancer Research*, ⁵*Instituto de Salud Carlos III*, ⁶*IdISBa*, ⁷*University of the Balearic Islands*

This presentation will discuss the development and validation of Nutri S-Can, a short screener which evaluates the degree of adherence to the 2018 WCRF/AICR Cancer Prevention Recommendations. The aim is for it to become a standardized, feasible and rapid tool to be used in clinical settings at an individual level. The methodology employed and results obtained so far will be discussed.

Symposium 3

INTEGRATING TIMING OF DIET, PHYSICAL ACTIVITY, AND SLEEP OVER TIME TO DETERMINE LINKS TO HEALTH

Tuesday 27 June | 10:15-12:15

Location: Classroom FB-028

Chair: Heather Eicher-Miller

Discussant: Sarah McNaughton

All daily activities take place in a sequence of time, forming a daily lifestyle pattern. Yet, consideration of time in patterns of dietary and movement behaviours (physical activity, sleeping) is new with little joint examination of time-based or chrono patterns. This symposium will explore novel approaches to dietary and movement behavior patterning in relation to health.

Heather Eicher-Miller¹, Rebecca Leech², Sarah McNaughton²

¹Purdue University, ²Deakin University

S03.01 COMPARING TEMPORAL DIETARY, PHYSICAL ACTIVITY, AND JOINT DIETARY AND PHYSICAL ACTIVITY PATTERN CLUSTER RELATIONSHIPS WITH HEALTH

Heather Eicher-Miller¹, Luotao Lin¹, Jiaqi Guo¹, Anindya Bhadra¹, Saul Gelfand¹, Edward Delp¹, Elizabeth Richards¹, Erin Hennessy²

¹Purdue University, ²Tufts University

Daily temporal patterns of energy intake and physical activity counts have been independently and jointly linked with health indicators but the strength of those associations have not been compared. This talk will feature methods to temporally patterning both behaviors together and determine if their joint patterning has stronger relationships with health compared with each behavior pattern alone.

S03.02 EXPLORING THE RELATIONSHIP BETWEEN WEEKDAY AND WEEKEND DAY TEMPORAL DIETARY PATTERNING

Heather Eicher-Miller¹, Luotao Lin¹, Jiaqi Guo¹, Saul Gelfand¹, Anindya Bhadra¹, Edward Delp¹, Elizabeth Richards¹, Erin Hennessy²

¹Purdue University, ²Tufts University

Energy and dietary quality are known to differ between weekdays and weekend days. Weekday temporal dietary patterns are linked with health indicators but weekday pattern links are unknown. This talk will explore the link between temporal dietary patterns of both a weekday and a weekend day and health indicators (body mass index, waist circumference, and obesity) and their overlap of membership.

S03.03 METHODS FOR UNDERSTANDING OF THE TEMPORAL PATTERNING OF DIET AND MOVEMENT BEHAVIOURS: A SCOPING REVIEW

Rebecca Leech¹, Stephanie Chappel², Nicola Ridgers³, Ralph Madison¹, Heather Eicher-Miller⁴, Carol Boushey¹, Sarah McNaughton¹

¹Deakin University, ²CQUniversity, ³Appleton Institute, ⁴University of South Australia, ⁴Purdue University

This scoping review identifies novel analytic methods for determining temporal patterns of diet and movement behaviours (physical activity, sedentary behaviours, sleep) and the contexts in which they occur. The identified methods, temporal patterns, and their contextual correlates and their associations with health outcomes were examined across the 14 included studies.

Symposium 4

ACCOUNTING FOR MEASUREMENT ERROR AND MISCLASSIFICATION - DIFFERENT METHODS FOR DIFFERENT RESEARCH STUDY DESIGNS

Tuesday 27 June | 15:30-17:30

Location: Concert Hall

Discussant: Laurence Freedman

Self-reported dietary intakes, physical activity and related measures are subject to considerable error, which challenges the reliable interpretation of results over a wide range of study designs. We focus on methods of adjusting for such error in three designs: cohort studies with (i) a baseline or (ii) time-varying exposure or (iii) studies linking 'latent' exposure groups to a health outcome.

Pamela Shaw¹, Anne Thiébaud², Cécile Proust-Lima³, Laurence Freedman⁴

¹Kaiser Permanente Washington Health Research Institute, ²Research Center for Epidemiology and Population Health, INSERM,

³Bordeaux Population Health Research Center, INSERM, ⁴Gertner Institute for Epidemiology

S04.01 BEST PRACTICE RECOMMENDATIONS FOR APPLYING REGRESSION CALIBRATION

Pamela Shaw^{1,2}, Lillian Boe², Douglas Midthune³, Paul Gustafson⁴, Victor Kipnis³, Eunyoung Park⁵, Daniela Sotres-Alvarez⁶, Laurence Freedman⁷

¹Kaiser Permanente Washington Health Research Institute, ²Memorial Sloan Kettering Cancer Center, ³National Cancer Institute, ⁴University of British Columbia, ⁵University of Pennsylvania, ⁶University of North Carolina, Chapel Hill, ⁷Sheba Medical Center

Regression calibration is a popular approach for addressing bias introduced in regression analysis by an error-prone exposure. Regression calibration has the potential to greatly reduce bias when used properly, however, several pitfalls can occur in practice. We discuss practical issues and recommendations to consider when applying this method. Issues are illustrated with real data examples.

S04.02 CORRECTLY ACCOUNTING FOR MISCLASSIFICATION WHEN LINKING LATENT EXPOSURE GROUPS WITH HEALTH OUTCOMES

Cécile Proust-Lima¹, Maris Dussartre¹, Viviane Philipps¹, Cécilia Samieri¹, Paul Gustafson¹, Pamela Shaw¹

¹Inserm, University of Bordeaux

Latent groups are valuable tools to summarize complex multidimensional exposures and assess their association with external information. When doing so, the inherent error of classification is often ignored. We introduce analytical solutions to account for it and illustrate them in simulations and applications evaluating the association between lifestyle profiles and cognitive aging in the elderly.

S04.03 BIAS RESULTING FROM THE INTERMITTENT MEASUREMENT OF AN ERROR-PRONE EXPOSURE IN SURVIVAL ANALYSIS

Anne Thiebaut¹, Viviane Philipps¹, Veronika Deffner², Hendrieke Boshuizen³, Laurence Freedman⁴, Cécile Proust-Lima¹

¹Inserm, ²Ludwig-Maximilians-Universität, ³Netherlands Institute for Public Health and the Environment, ⁴Gertner Institute for Epidemiology and Health Policy Research

When assessing the association between a time-varying exposure and the later occurrence of a disease, epidemiologic studies often rely on repeated rather than continuous exposure measurements. We compare possible approaches for handling such intermittently measured exposure in a Cox regression and the resulting biases using simulations. We illustrate these methods with a real data example.

S04.04 DISCUSSION OF THREE PAPERS ON MEASUREMENT ERROR AND MISCLASSIFICATION

Laurence Freedman¹

¹Gertner Institute for Epidemiology

I will discuss the three papers presented in this symposium. All represent work performed as part of the STRATOS (Strengthening Analytical Thinking for Observational Studies) initiative, an international collaboration of biostatisticians aimed at reducing existing gaps between available statistical methodology and practice. This is particularly needed when analyzing data that are prone to error.

Symposium 5

HARMONIZED FOOD CONSUMPTION DATA COLLECTION IN EUROPE: TIME TO REFLECT AND PLAN AHEAD

Tuesday 27 June | 15:30-17:30

Location: Classroom FG-042

Co-Chairs: Sofia Ionnidou & Androniki Naska

Discussant: Marga Ocké

Reliable and harmonized food consumption data in Europe are important for EFSA. In 2014, a guidance on harmonization of national dietary surveys was published. This symposium aims to present lessons learnt from the EU Menu framework project and data, share the findings of a review on new methods, and discuss options for an update of the guidance for harmonized food consumption surveys in Europe.

Sofia Ioannidou¹, Carla Lopes², Caroline Van Rossum³, Marga Ocké³, Androniki Naska⁴

¹European Food Safety Authority (EFSA), ²University of Porto, ³National Institute for Public Health and the Environment (RIVM),

⁴National and Kapodistrian University of Athens

S05.01 METHODS AND TOOLS USED IN EU MENU FOOD CONSUMPTION SURVEYS: QUALITY AND LEVEL OF HARMONIZATION OF THE DATA COLLECTED IN THE EU MENU FRAMEWORK

Carla Lopes¹, Catarina Carvalho², Milton Severo³, Daniela Correia¹, Andreia Oliveira³, Caroline Van Rossum⁴, Marga Ocké⁴, Duarte Torres²

¹Faculty of Medicine/Institute of Public Health, University of Porto, ²Faculty of Food and Nutrition Sciences/Institute of Public Health, University of Porto, ³Institute of Public Health, University of Porto, ⁴National Institute for Public Health and The Environment (RIVM)

The EFSA-funded ERA EU-Menu project aims to map the existing EU Menu surveys and evaluate quality indicators from several dimensions, including: sampling & recruitment; training of interviewers; dietary and non-dietary data collection procedures. Preliminary results of 96 quality indicators show high compliance with EFSA guidance methodology but some indicators denote topics for improvement.

S05.02 EVALUATION OF SELF ADMINISTERED TOOLS AND METHODS THAT CAN POTENTIALLY BE USED IN NATIONAL FOOD CONSUMPTION SURVEYS' FINDINGS FROM AN UMBRELLA REVIEW

Caroline Van Rossum¹, Sovianne ter Borg¹, Andreia Oliveria², Catarina Carvalho², Marga Ocké¹

¹RIVM (Dutch National Institute for Public Health and the Environment), ²University of Porto

An umbrella review was conducted on the evaluation of new/existing methods and tools that can potentially be used in national dietary surveys. Online 24-h recalls and smart-phone food records have potential for use in Europe. However, the collection of supplementary information (internet access, e-skills, available data, best practices and lessons from front-runners) is needed.

S05.03 WHAT'S ON THE MENU IN EUROPE? HARMONIZED FOOD CONSUMPTION DATA IN EUROPE: ACHIEVEMENTS AND LESSONS LEARNT

Sofia Ioannidou¹, Androniki Naska², Elissavet Valanou², Anastasia Livaniou¹

¹European Food Safety Authority, ²National Kapodistrian University of Athens

Under the "What's on the Menu in Europe? - EU Menu" project EFSA supports national dietary surveys in the EU to collect harmonised consumption data. Running however such surveys is a complex and challenging task. The variability in protocols, response rates and data quality challenge the evidence collected. Therefore, future data collection may benefit from technological advancements.

Symposium 6

RECENT INNOVATIONS AND CHALLENGES IN WEB-BASED DIETARY ASSESSMENT TOOLS: CATALYSTS AND FUTURE DIRECT

Tuesday 27 June | 15:30-17:30

Location: Classroom FB-028

Discussant: Kirsten Herrick

This symposium will spotlight recent enhancements from myfood24, Foodbook24, FoodFlip, Intake24, and ASA24. Each speaker will describe a recent innovation to their tool and describe motivations and considerations during its development. A panel discussion will follow with interactive audience polls using Mentimeter to solicit feedback and shape future innovations in dietary assessment.

Janet Cade¹, Eileen Gibney², Mary L'Abbe³, Toni Steer⁴, Kirsten Herrick⁵

¹University of Leeds, ²University College Dublin, ³University of Toronto, ⁴University of Cambridge, ⁵National Institutes of Health/National Cancer Institute

S06.01 MAKING FOOD INTAKE DATA FAIR: FOODBOOK24 AND FNS-CLOUD

Eileen Gibney¹

¹UCD

Unique challenges exist for the exploitation of nutrition data. Available data varies in terms of the methods of data collection, the type of data collected, and timeframe of collection. Available data needs to be FAIR (findable, accessible, interoperable and reusable) to ensure continued use. Online intake assessment tools such as foodbook24 and others offer a step change in addressing such issues.

S06.02 Dietary Assessment in a Changing Policy World

Mary R. L'Abbe¹, Guanlan Hu¹, Mavra Ahmed¹, Jennifer Lee¹, Emily Ziraldo¹

¹University of Toronto

Mandatory Front of Pack Labelling (FOPL) will come in force in Canada January 2026. FLIP, the Food Label Information and Price database contains nutrition information of brand name foods sold in Canada and the FoodFLIP© app allows users to enter products by brand name or scanning the barcode. National dietary surveys capturing brand name foods are needed to evaluate FOPL and other food policies.

S06.03 INTAKE24: CREATING A CUSTOMIZABLE INTERFACE FOR RESEARCHER INNOVATION

Toni Steer¹, Polly Page¹

¹MRC Epidemiology Unit, University of Cambridge

Digital tools offer considerable potential but can be complex to adapt. Intake24 Version 4 provides simplified software to facilitate researcher innovation and scope to self-customise. This allows easier customisation of recalls, e.g. to capture specific eating occasions, include bespoke questions about eating behaviours or out-of-home consumption, or adapt for a specific study population.

S06.04 MYFOOD24, NUTRITION MANAGEMENT SOFTWARE FROM RESEARCH TO PERSONALISATION

Janet Cade¹

¹University Of Leeds

myfood24 supports food and nutrient intake measurement. New healthcare apps provide personalized nutrition management. The system includes barcode scanning and a comprehensive food composition database. myfood24 Diet Optimization Engine?, suggests dietary changes to meet nutrition targets and optimize environmental sustainability. Pilot tests have been conducted before broader implementation.

S06.05 BREAKING DOWN SILOS: EXPANDING ASA24 TO STUDY THE RELATIONSHIP BETWEEN EATING AND SLEEPING

Kirsten Herrick¹, Marissa Shams-White¹, Lauren O'Connor¹, Sydney O'Connor¹

¹National Institutes of Health/National Cancer Institute

Tools exist to measure diet, physical activity, and sleep individually, but measurement of all three over a 24-hour period remains elusive. To address this gap, the National Cancer Institute developed a Sleep module to accompany the Automated Self-Administered 24-hour (ASA24) Dietary Assessment Tool. We will share the content and considerations relevant to the development of ASA24 Sleep module.

Symposium 7

DEVELOPMENT OF NEW MOBILE ECOLOGICAL MOMENTARY DIET ASSESSMENT TECHNOLOGY: METHODOLOGICAL AND IMPLEMENTATION CONSIDERATIONS

Wednesday 28 June | 10:00-12:00

Location: Concert Hall

Chair: Susan M. Schembre

We are developing a new mobile ecological momentary dietary assessment (mEMDA) app that modernizes how we collect dietary surveillance data. Unlike traditional methods, mEMDA is a brief survey that assesses dietary intake in near real time from free-living individuals. Presentations in this symposium will discuss considerations for developing and using this next generation dietary assessment tool.

Susan M. Schembre¹, Christopher A. Taylor², Rick Weiss³, Margaret Allman-Farinelli⁴

¹Georgetown's Lombardi Comprehensive Cancer Center, ²Ohio State University, ³Viocare, Inc., ⁴The Sydney University

S07.01 DEVELOPING AND REFINING THE mEMDA FOOD SURVEY

Christopher Taylor¹, Rick Weiss², Cynthia Thomson³, Genevieve Dunton⁴, Edward Bedrick³, Michelle Jospe⁵, Kelli Richardson³, Susan Schembre⁵

¹Ohio State University, ²Viocare, Inc., ³University of Arizona, ⁴University of Southern California, ⁵Georgetown University

National surveillance data were used to identify foods that contributed >90% of total saturated fat and added sugars intakes across sex, age, and race/ethnicity subgroups of U.S. adults. This derived 94 food categories to be included; presenting a challenge to our burden reduction goal. The list was refined by partitioning foods into common or similar sources in the style of an FFQ.

S07.02 ENGAGEMENT AND COMPLIANCE CONSIDERATIONS IN THE DESIGN OF mEMDA

Susan Schembre¹, Christopher Taylor², Rick Weiss³, Cynthia Thomson⁴, Genevieve Dunton⁵, Edward Bedrick⁴, Michelle Jospe¹, Kelli Richardson¹

¹Georgetown's Lombardi Comprehensive Cancer Center, ²The Ohio State University, ³Viocare, Inc., ⁴University of Arizona, ⁵University of Southern California

mEMDA is a brief EMA-based dietary survey that will be completed 4-6 times/day. With an objective to limit the total interaction with mEMDA to <15 minutes/day, we are striving to achieve a per use effort of <3 minutes without compromising data quality. This presentation will discuss potential barriers to compliance and how we are preemptively addressing these issues during the development.

S07.03 DESIGN CONSIDERATIONS FOR THE MEMDA APP USER INTERFACE

Rick Weiss¹, Christopher Taylor², Cynthia Thomson³, Genevieve Dunton⁴, Edward Bedrick³, Michelle Jospe⁵, Kelli Richardson³, Susan Schembre⁵

¹Viocare, Inc., ²Ohio State University, ³University of Arizona, ⁴University of Southern California, ⁵Georgetown University

Our mEMDA app consists of: 1) a mobile app, 2) an administration system, and 3) a nutrient database. The critical features are finding foods/beverages consumed and reporting the amount consumed. mEMDA is a survey with a predetermined list of foods and beverages from which users select items recently consumed. Users report portion size estimations, adjustments, and add-ons in a simple workflow.

S07.04 CONTEXT MATTERS IN DIETARY ASSESSMENT: INSIGHTS FROM EMA

Margaret Allman-Farinelli¹, Brigitte Battaglia¹, Lydia Lee¹, Stephanie Partridge¹, Sisi Jia¹

¹The University of Sydney

Nutritionists typically use static measures to assess food intakes and aggregate nutrient intakes or categorize diet patterns over periods such as a day (24-h recall) or months (food frequency questionnaire). This approach loses information integral to understanding the how, why, where, and what of consumption ignoring food intake is a dynamic process. EMA allows measurement of intake in context.

Symposium 8

MEASUREMENT ERROR IN DIET AND PHYSICAL ACTIVITY ASSESSMENT: INSIGHTS FROM VALIDATION STUDIES

Wednesday 28 June | 10:00-12:00

Location: Classroom FG-042

Chair: Kevin Dodd

Self-reported dietary assessments measure usual dietary intake with considerable error. Both self-reported and accelerometry-based activity data are likely plagued by similar issues. Measurement error can distort observed associations and mask the effects of interventions. Validation studies help us understand the structure of measurement error, informing strategies to mitigate its effects.

Sharon Kirkpatrick¹, Kevin Dodd², Victor Kipnis²

¹University of Waterloo, ²National Cancer Institute

S08.01 MEASUREMENT ERROR AFFECTING WEB- AND PAPER-BASED DIETARY ASSESSMENT INSTRUMENTS

Sharon Kirkpatrick¹

¹University of Waterloo

The measurement error structures of online and paper-based FFQs, online 24HRs, and paper-based FRs in relation to energy, protein, sodium, and potassium (and associated densities) were investigated in biomarker-based validation studies drawn primarily from three established cohorts. Findings suggest different instruments have unique strengths that should be leveraged in epidemiologic research.

S08.02 A DEEPER DIVE INTO THE MEASUREMENT ERROR STRUCTURE OF SELF-REPORT DIETARY ASSESSMENT INSTRUMENTS

Kevin Dodd¹

¹National Cancer Institute

By providing a comprehensive summary of relative contributions from distinct error sources to attenuation factors and validity coefficients, as well as information about shared biases among instruments, the joint measurement error structure (estimated in a validation study) of multiple assessment instruments enhances understanding of the effects of measurement error on research findings.

S08.03 ERROR IN ACCELEROMETRY MEASUREMENTS AND ITS IMPLICATIONS FOR EVALUATING INTERVENTION EFFECTS IN A LONGITUDINAL RANDOMIZED TRIAL

Victor Kipnis¹, Midthune Douglas¹

¹National Cancer Institute

Systematic and random measurement errors in accelerometry and their impact on estimating physical activity (PA) were investigated in a randomized longitudinal intervention study (BEAT) of physical activity in breast cancer survivors using a mirrored validation study (COMPARE). The estimated effect of the intervention on PA was substantially stronger after measurement error adjustment.

Symposium 9

INTEGRATING DIET SCREENING INTO ROUTINE CLINICAL CARE AND COMMUNITY-BASED SETTINGS: THE TIME IS NOW

Wednesday 28 June | 10:00-12:00

Location: Classroom FB-028

Co-Chairs: Maya Vadiveloo & Niyati Parekh

This symposium focuses on advances in dietary assessment screening in clinical settings among diverse groups. Responsive to the American Heart Association and American Academy of Pediatrics' call to action: to simplify clinician-led dietary counseling, speakers will discuss best practices for implementing new tools clinically and working with children and those following ethnic dietary patterns.

Maya Vadiveloo¹, Andrea Deierlein², Niyati Parekh², Mercedes Sotos Prieto³

¹University of Rhode Island/Kingston, ²New York University, ³University Autonomos of Madrid

S09.01 DIETARY ASSESSMENT IS FEASIBLE: APPLICATIONS OF THE HEALTHY HEART SCORE AND MEDITERRANEAN LIFESTYLE SCREENER IN CLINICAL SETTINGS

Mercedes Sotos Prieto^{1,2}, Maya Vadiveloo²

¹University Autonomos of Madrid, ²University of Rhode Island

Decades of epidemiologic research confirm that adults who reach middle age with ideal cardiovascular health live longer, healthier lives free of CVD. This symposium will focus on two validated tools that have been translated from the epidemiological knowledge to the clinic. One is the Healthy Heart Score, and the other one is the applicability of the MEDLIFE, a Mediterranean Lifestyle screener.

S09.02 IMPLEMENTATION AND TESTING OF RAPID DIETARY SCREENING INTO CLINICAL CARE SETTINGS

Maya Vadiveloo¹

¹University of Rhode Island

Diet is a basis of disease prevention, yet is rarely discussed clinically due to lack of time and training for clinicians. Rapid screening tools that use technology to aid diet counseling can help address these barriers; this talk describes the trial protocol for a mixed methods pilot evaluating the clinical utility of the rapid Prime Diet Quality screener (rPDQS) with clinical decision support.

S09.03 CULTURALLY-SENSITIVE DIETARY ASSESSMENT: INSIGHTS FROM THE MASALA STUDY

Niyati Parekh¹

¹New York University

We focus on the DASH diet and CV in a South Asians (SA). We present findings from our study in a SA cohort that will inform public health policy for SA dietary guidance, while supporting clinical guidelines to improve health. Our work also entails the development of tools that can capture unique aspects of the SA diet. We discuss the prospect of implementing a rapid screener in a clinical setting.

S09.04 DIETARY ASSESSMENT CONSIDERATIONS IN CHILDREN AND ADOLESCENTS - KEY TAKEAWAYS FROM THE PEDIATRIC FOOD INTAKE SYSTEM PILOT STUDY

Andrea Deierlein¹

¹NYU School of Global Public Health

This presentation will provide an overview of current dietary assessment tools available for use in diverse pediatric populations and present pilot findings on the development of a novel assessment tool for self-administration in children ages 8 to 14 years, the Pediatric Food Intake System (P-FITS).

Symposium 10

CO-DESIGNING FIT FOR PURPOSE SOLUTIONS FOR MEASURING PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

Tuesday 27 June | 1530-1730

Location: Classroom C1060

Chair: Bronwyn Clark

This symposium will explore new methods of physical behaviour measurement designed for particular settings and outcomes and will give a real-world example of how measurement can be integrated into public health settings.

Bronwyn Clark¹, Genevieve Healy¹, Alan Donnelly² and Sjaan Gomersall¹

¹University of Queensland, ²University of Limerick

S10.01 WHAT IS POSSIBLE FOR FUTURE METHODS OF MEASURING PHYSICAL BEHAVIOUR?

Bronwyn Clark¹

¹University of Queensland

Dr Clark will explore the use of combined monitor and self-report methods using triggered momentary sampling. New technologies provide promise for measuring activity and posture in particular contexts like the workplace. Dr Clark will introduce new, participant friendly solutions for measuring sedentary behaviour and physical activity and the context of these.

S10.02 DESIGNING PRODUCTS FIT-FOR-PURPOSE FOR UNDERSTANDING CONTEXT OF CHANGE

Genevieve Healy¹

¹University of Queensland

Desk workers have been identified as a key target group for sedentary behaviour interventions, with sit-stand desks often a key component of successful interventions. Dr Healy will outline measures that have been successfully used for capturing prolonged sedentary time in large-scale studies in workers, and introduce a new measure designed to capture sit-stand desk usage.

S10.03 COMBINED MEASUREMENT OF PHYSICAL ACTIVITY AND DIET; THE WEALTH PROJECT

Alan Donnelly²

²University of Limerick

Physical behaviours may modify dietary behaviours. Combined measurement of diet and physical behaviours is the focus of the European WEALTH research collaboration (Wearable Sensor Assessment of Physical and Eating Behaviours). The presentation will outline the methods being employed in WEALTH, which combine accelerometer measurement with triggered Ecological Momentary Assessment questions.

S10.04 ESTABLISHING A DATA REGISTRY IN AN INTERPROFESSIONAL, COMMUNITY DELIVERED TYPE 2 DIABETES CLINIC

Sjaan Gomersall¹ (Presented by Genevieve Healy¹)

¹University of Queensland

Evaluation of health promotion in healthcare settings is difficult to implement when considering burden on participants, clinical staff, managing expectation of all stakeholders and integration of systems to collect both clinical and evaluation data. Dr Healy will describe the development and implementation of a data registry (and minimum data set) at an interprofessional community clinic for people living with type 2 diabetes.