## TRACK: HEALTH – COMFORT – SELF-ESTEEM Presentation: Assessment of nutrition

A.J. ASTELL, T.D. ADLAM, F. HWANG, H. KHADRA, L. MACLEAN, T. SMITH, C. TIMON, E.A. WILLIAMS. Validating NANA: Novel assessment of nutrition and ageing. Gerontechnology 2012;11(2):243; doi:10.4017/gt.2012.11.02.424.00 Purpose Older adults are at risk of malnutrition, which may arise due to a range of factors including impaired physical function, such as problems with chewing and swallowing or reduced mobility, cognitive difficulties such as dementia or other neurological conditions. or mental health factors such as depression or social isolation<sup>2</sup>. Malnutrition risk is difficult to identify due to limitations on prospectively collecting accurate information over time about the nutritional and hydration status of older adults, plus data on their physical activity, cognitive function and mental heath status. The purpose of this study was to validate the NANA – Novel Assessment of Nutrition and Ageing – toolkit, a novel technology based on a touch screen computer for collecting information from older adults in four domains: dietary intake, cognitive function, mood and physical activity. Method Forty older adults aged between 65 and 88 years (M=72.4), were recruited to participate in the fifteen-week study (July-November 2011). Exclusion criteria included English not the first language, diagnosis of dementia, incapacity to provide consent, current or recent treatment for a heart condition. To validate the NANA toolkit participants also completed a selection of standardised measures across the four domains - nutrition data were validated against a blood panel and four-day food diary. The cognition data were validated against a neuropsychological test battery. The mood data were validated against a standardised mood measure<sup>3</sup> and the physical activity data against a standardised physical activity questionnaire<sup>4</sup>. Results & Discussion The NANA-system was successfully installed and data collected from participants over three separate seven-day periods during the study. Analysis of the data collected in the second week is currently under way and will be presented and compared with the data collected using currently available gold standard measures in each domain. Preliminary findings suggest that NANA offers the possibility of collecting accurate information about nutrition, cognition, mood and physical activity or any combination of these, in people's own homes with minimum participant burden. This presents new opportunities for taking a holistic approach to understanding factors that influence health and well-being as people age.

## References

- 1. Astell A, Williams L, Adlam T, Hwang F. NANA: Novel assessment of nutrition and ageing. Gerontechnology 2010;9(2);95-96; doi:10.4017/gt.2010.09.02.043.00
- 2. Guigoz Y, Lauque S, Vellas BJ. Identifying the elderly at risk for malnutrition. The Mini Nutritional Assessment. Clinics in Geriatric Medicine 2002;18(4):737-57; doi:10.1016/S0749-0690(02)00059-9
- Yesavage JA, Brink TL, Rose TL, Lum O, Huang V, Adey M, Leirer VO. Development and validation of a geriatric depression screening scale: a preliminary report. Journal of Psychiatric Research 1982;17(1):37-49; doi:10.1016/0022-3956(82)90033-4
- Stewart AL, Mills KM, King AC, Haskell WL, Gillis D, Ritter PL. Champs Physical Activity Questionnaire for Older Adults: outcomes for interventions. Medicine & Science in Sports & Exercise 2001;33(7):1126-1141

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