NANA: Novel Assessment of Nutrition and Ageing

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Background

• Malnutrition in the community – difficult to collect reliable information
• Aim: develop and validate a new method – reduce burden, maintain or improve accuracy
• Approach: understand person in context at home, including physical activity, mood and cognitive function
Need to understand relationship between nutrition and other key areas: physical function, mood and cognition
Multidisciplinarity

- Over three years:
- 38 separate studies to develop and test the elements of NANA – over 400 people
- Including 3 validation studies with 100 people
- 2 PhD students - one = nutrition, one = gait and cognition
Case 1

• 79 year old female
Morning
Morning
Mid-day/afternoon
Mid-Day/afternoon
afternoon
Evening
Case 1

- BMI= 21
- **Average intake/day**
  - Energy: 6617kJ (1580calories)
  - Fat: 81g
  - Protein: 61g
  - Carbohydrate: 161g
  - Alcohol: 0g
  - Vitamin C: 74mg
Case 1

- MMSE 22/30
- Weekly average response speed to mood questions = 14.43 secs
- Group average = 10.61
- Weekly average response speed to cognitive questions = 5.26 secs
- Group average = 3.35 secs
Case 1

- Total expended kilocalories = 373
- Total expended activity hours per week = 2.8
- Exhaustion = yes
- Walking speed 15m = 6.74s; within norms = yes
- Grip strength = 11.2; within norms = no
- Frailty risk = yes
Main outcomes

• NANA dietary assessment is as good as currently available measures – lower burden on participants
• Developed novel daily cognitive assessment that people can do at home
• Developed techniques for measuring indicators of frailty at home
• Developed and tested intervention to improve gait stability
Going forward

• Two questions:

• 1. How can this information be used in the community?

• 2. How should we adapt NANA for other settings such as care homes, hospitals, mental health units, and community meals?

• Looking to work with new partners to develop new interfaces and information management
collaboration

- We welcome approaches to collaborate on research or new applications of NANA
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