A public health process evaluation of the PaperWeight Armband in screening for malnutrition among older adults

Ben Till1, Dr Penelope Nestel1, Kathy Wallis2, Annemarie Aburrow2 & Sam Agnew3
1 MSC Public Health Nutrition, University of Southampton, University Road, Southampton, SO17 1BJ, 2 Wessex Academic Health Science Network, Innovation Centre, 2 Venture Road, Chilworth, SO16 7NP, 3 Age Concern Hampshire, 18 St George’s Street, Winchester, Hampshire, SO23 8BB

Background: Malnutrition - the facts:
- Published data suggests 1 in 10 people over 65 are undernourished and 93% of these are living in the community1
- Malnutrition accounts for £19.6 billion of public health and social care expenditure in England2
- Underlying causes of malnutrition are multifactorial encompassing physiological, psychological and social factors
- The purpose of this process evaluation was to investigate how a novel approach to screening (using the Paperweight Armband (PWA) developed by Age UK Salford and Salford Royal NHS Foundation Trust3) could be used within the community by Age Concern Hampshire volunteers with support from the Wessex Academic Health Science Network (Wessex AHSN)

An Alternative Approach to Screening:
- The Paperweight Armband (PWA) measures mid upper arm circumference and was developed to identify individuals with a BMI <20kg/m2
- PWA (23.5cm long) should be used with weight loss questions to identify people at risk of malnutrition
- Volunteers were given training on the PWA, monitoring procedures, key risk factors for malnutrition and how they can act within their role
- PWA and weight loss questions were then used within the community by these volunteers

Methodology: Mixed

Qualitative Methods:
- Descriptive statistics were used to summarize data in the monitoring forms completed by volunteers visiting clients aged >50 years at home or at community events
- Monitoring forms included the use of the PWA, questions on weight loss, resources provided, and referral to community services

Qualitative Methods:
- Interviews were conducted with Project Managers (n=3) and a convenience sample of volunteers (n=5) to explore the use of the PWA, sustainability and usability, the role of volunteers, training and support, the impact of the armband and questions and the monitoring process
- Interviews were recorded and transcribed verbatim, then thematically analyzed using Nvivo

Conclusions and Implications:
The PWA was being used as a practical and visual tool by volunteers to discuss nutrition with their clients. However the PWA was also being used in isolation, without the weight loss questions, meaning those at risk of becoming malnourished may not be identified. As a result, the Wessex AHSN is now working with the Patients Association to develop a Nutrition Checklist and interactive tool to identify malnutrition by non-professionals and volunteers.

Suggested improvements if PWA was used in similar projects:
- Standardize training to focus on using the PWA and questions together
- Develop a reusable PWA
- Redesign monitoring procedure after reviewing process and forms with volunteers
- Develop peer support forum and regional nutrition champions

Results:
- 35 people were screened – the PWA was used on all individuals, but only 80% were asked questions regarding weight loss in the last six months
- 18% were found to be at risk – n=2 were identified as underweight and n=6 were identified as having lost weight in the last 6 weeks

Qualitative Results - Eight key themes were identified from the interviews:
1. Risk Factors for Malnutrition ➔ The PWA and malnutrition training had raised the awareness of risk factors for malnutrition. This was evident in numerous responses from Age Concern volunteers.
2. The PWA as a tool ➔ One volunteer stated: “It’s a practical aid to that conversation with the client”
3. Outcomes ➔ Raised awareness from volunteers to the risk factors of malnutrition and how they can act within their role. However volunteers were placing more emphasis on the PWA than the weight loss questions
4. Response ➔ Response to the project was very positive. One volunteer stated: “I’ve taken it on board quite strongly myself”
5. Usability ➔ Whilst all volunteers stated that the PWA was easy to use, misuse was reported.
6. Sustainability ➔ Providing data to inform future use of the PWA, usability, improvements to the monitoring process and having nutritional champions were all addressed regarding sustainability
7. Barriers ➔ Lack of monitoring, difficulty in getting volunteers to training, use of the PWA (e.g. PWA being used over clothing) and volunteer confidence were all highlighted as barriers to the project
8. Wider role of volunteers ➔ Volunteers were already taking a holistic approach, tackling many issues and acting as befrienders

References: