Optimising Nutrition Status among older people during COVID-19.

Using app technology to promote self-screening of malnutrition risk in the community.

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Description of the initiative

- **Background and Context**

Malnutrition, already prevalent in the older adult community, is exacerbated by COVID-19 and its restrictions. Older adults have less opportunities to obtain the quantity and quality of food necessary to maintain strength, health and ability to cope with potential infection. Screening opportunities to identify malnutrition risk among older adults by healthcare professionals are hindered or suspended due to risk of infection through physical contact and reduced access to direct health services.

- **Rationale for the initiative**

Innovative means of screening for malnutrition are required to provide the earliest identification of the risk of malnutrition. The Determine your Health Checklist (DETERMINE) is an existing validated self-screening checklist of nutritional status in older adults (>65) living in the community and is very practical to use. Previous research suggest app technology can be a user friendly tool to provide nutrition support among older adults and/or carers.

- **Objectives and scope**

This project will connect older adults and their carers in social isolation by helping them to determine nutritional support needs identified through smartphone technology. Furthermore, it will provide real time estimates of the prevalence of risk of malnutrition among community dwelling older people in Ireland.

Planned activities & deliverables

- **Outline the steps to be taken**
1. Develop the Optimum Nutrition Status app to deliver the self-screening malnutrition screening tool DETERMINE and build an artificial intelligence from the data returned by user interface to deliver optimum 'real –time' nutrition advice to older persons and/or carers.
2. Build on existing communication networks to disseminate and use of an implementation science approach to evaluation of the adoption, acceptability, adaptability and feasibility of the app.
3. Complete the design and functionality of the Optimum Nutrition Status app and design an implementation framework for a national coverage.

- **What are the Concrete deliverables of the project?**
1. Development of an intuitive app with technical support to track the mode and rate of engagement.
2. Production of time stamped records of the nutrition status of the older adults using the app identifying prevalence and incidence of risk to malnutrition.
3. Identification of the barriers and facilitators of using app technology among older adults.
4. A model to predict the risk of malnutrition among older adults who do not use Smartphone technology.

- **What achievements are possible in the next 12 and 24 months?**

0-12 months – the design, feasibility and development of an Optimum Nutrition Status app with an informed implementation plan for a national launch

12-24 months – piloting the app regionally with data collection and post intervention evaluation to map the use of the map among service providers and users.

Resources & enablers

- **Describe personnel, financial needs**

Prospective industry partner, who will be chosen for experience in developing health applications and of the requirements needed from a research standpoint.

- **Specify how the grant will be spent**

The development of the app including set-up, support, 1-year license to use developer platform, and push notification functionality (est. €25,000).

- **What factors will make it successful?**

This project, ONSCOV19, is supported by a co-applicant group who recognise the need to ensure optimal nutrition status to mitigate the direct and indirect impact of COVID-19 on the health of older adults living in the community. The team includes expertise in dietetic practice, research and nutrition-related matters of public health, academic leaders in improving quality and safety of care for older adults, implementation science with ICT, and data analytics. The research team is supported by collaborators who represent the nutritional, service provision and health and social care interests of older adults to support this vulnerable group to maintain a quality of life and health.

Results/outcomes & expected impact

- **How will the findings be implemented?**

The findings will be used as a basis to upscale this innovative intervention nationally.

- **How will this project advance patient care / contribute to optimal nutritional care?**

The implementation science approach and use of artificial intelligence will inform the integration of nutrition services across primary, secondary and community services.

- **What makes the project innovative?**

A cross disciplinary, agency and evidence based approach with insight from older adults and/or their carers.

- **Will the project be likely to influence national nutrition policy?**

Yes through the inclusion of health service executive personnel including dietetic advisors, national clinical programme leads and Gerontological charities and associations as collaborators on this project. Potential for collaboration with ALONE charity working with older people in community (in consultation).

- **Is the project transferable to other settings / countries?**

By considering the setting for implementation from the beginning of this project a comprehensive strategy will be developed by encouraging early thinking about how this initiative could be transferred to another setting/country.

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