

Tackling malnutrition in older patients on the wards

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Experts led by Newcastle University are designing and building a system aimed at combating malnutrition in older people in hospitals.

hospitalfoodie is a food and nutrition [management system](#) which aims to improve the nutrition of older people by providing a bedside touch screen for entering nutritional requirements, selecting food, helping nursing staff monitor how much was eaten and to alert staff if a patient is missing out on vital nutrients.

In developing the system, a team from Newcastle and Reading Universities and the Glasgow School of Art have brought together their expertise including nutrition, design and health provision and worked with staff at all levels of the NHS including ward staff, catering, management, older people and charities such as the British Association for Parenteral and Enteral Nutrition (BAPEN).

Professor Paula Moynihan from Newcastle University who is leading the mappmal project said: “When they come into the ward the hospitalfoodie automatically prompts staff to carry out nutritional screening and this information is used to calculate their individual requirements.

“The advantages for patients will be numerous – as well as prompting staff to assist patients at mealtimes, hospitalfoodie means patients won’t have to order a meal well in advance. They’ll be able to order through the bedside touch screen and because the patient’s food preferences and

dietary restrictions are put in the system it will ensure that they are only offered appropriate food choices.”

Staff will see an image of the food on the bedside touch screen and can then rub away the picture to show the amount of food consumed. The amount of nutrients in the food eaten is then automatically calculated.

The patient’s progress against their daily targets is displayed on the bedside touch screen and the staff interface at the nurses’ station. If the patient has not met their targets for calories or key nutrients, the system will alert staff and suggest appropriate options to make up the shortfall.

The system includes a range of mini-meals packed with calories and nutrients for older people including biscuits and cakes, ice creams, soups and savoury scones. Dr. Lisa Methven from the University of Reading said: “Older patients generally have small appetites and do not want to eat large meals, they also often suffer from a deterioration in their ability to taste food. With this in mind we have developed foods that are small portion sizes yet high in nutritional content and taste, to consume any time of day.”

The School of Design at The Glasgow School of Art led on the design and technology aspects of the project including methods to engage with NHS staff and [older people](#), the design of the interfaces and a prototype ward food trolley which is currently being developed along with furniture specially adapted to the needs of older patients to make mealtimes more comfortable and enjoyable. “The system has been designed to be as clear, accurate and easy-to-use for all concerned and has been informed by end user involvement,” said Professor Alastair Macdonald.

Professor Moynihan added: “Around 40 per cent of [older patients](#) are malnourished with those aged over 80 at highest risk and this issue has

been highlighted by several [charities](#). It's currently very difficult for staff to track how much nutrition a patient is getting and this system will help."

Demonstrating the prototype of the system at the BAPEN conference today (Tues 29th Nov) the mappmal team have already had interest from consultants in several NHS trusts.

"BAPEN is delighted to have been involved in the development of hospitalfoodie and to host its launch on the first day of our Conference", says Dr Mike Stroud, Chair of BAPEN. "The principles on which hospitalfoodie is based chime completely with BAPEN's own. BAPEN agrees that hospitals need a whole system approach to tackle variation in delivery of nutritional care, with an emphasis on individual requirements, robust monitoring and ease of provision to back up any shortfall in intake that may put patients at increased and unnecessary risk of [malnutrition](#) and poorer health outcomes."

hospitalfoodie means:

- patient's malnutrition gets picked up at admission
- food intake is monitored and shortfalls are acted upon
- the patient gets the foods they like in more suitable portion sizes
- the menu is tailored to the patient's needs and they can choose closer to meal times
- patient is comfortable and ready for meal times
- patient's need for assistance at meal times is identified and more trained staff are available
- When the patient leaves the [hospital](#), a discharge summary will facilitate continued nutritional support in the community

Provided by Newcastle University

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