

The Nutrition Wheel

A new, simple and interactive tool to help identify risk of undernutrition in older people in the community and provide advice and signposting



Annemarie Aburrow, Consultant Dietitian to the Wessex Academic Health Science Network (AHSN)

Malnutrition (as undernutrition) still remains under-detected and under-treated by health and social care professionals,¹ despite NICE guidance and quality standards recommending nutritional screening using validated tools such as the Malnutrition Universal Screening Tool ('MUST').^{2,3} The Wessex Academic Health Science Network (AHSN) led a Nutrition in Older People programme from 2014-2018. The programme involved carrying out various projects to understand the barriers and enablers to nutrition screening in the community. One of the issues discovered was the need for simpler tools to help identify undernutrition – tools that could be used with minimal training and equipment. The programme also worked with several voluntary sector organisations (such as Age UK Hampshire and One Community in Eastleigh) to help understand the role that volunteers could have in supporting the early identification of undernutrition in the community.

The Nutrition Wheel was initially developed as part of Wessex AHSN's Nutrition in Older People programme, and is now being taken forward as part of their new Healthy Ageing programme (<http://wessexahsn.org.uk/nutritionwheel>). It is a simple conversation starter to help the wider community workforce (including volunteers and carers) to identify undernutrition and provide some simple advice and signposting. The Nutrition Wheel is based on the Patients Association Nutrition Checklist, which was developed in collaboration with Bournemouth University and the Patients Association. The Patients Association Nutrition Checklist (www.patients-association.org.uk/patients-association-nutrition-checklist-toolkit) was published in December 2018 and consists of two parts. Section A contains four key questions to identify risk of undernutrition, which have been validated again 'MUST'

in a research project which is currently being published. Section B asks additional questions to help the user to identify the potential causes of undernutrition and guides the user through the basic advice and signposting.

The Nutrition Wheel is not designed to be a replacement for clinical screening tools such as 'MUST'. Rather, the Nutrition Wheel could be used to highlight the 'clinical concern' (e.g. unintentional weight loss, loose fitting clothes, poor appetite) cited by NICE clinical guideline 32² as a prompt to nutrition screening in the context of a conversation and signposting to appropriate nutritional guidance.

This article will cover the development of the Nutrition Wheel and the associated Nutrition Wheel Toolkit, who should be using the Nutrition Wheel and the next steps in the development/publishing process.

Development of the Nutrition Wheel

In 2017, a group of seven undergraduate healthcare students from Bournemouth University agreed to develop the questions, advice and signposting from the Patients Association Nutrition Checklist into an initial prototype as part of their 'Service Improvement Project'. As part of this project, the students also obtained some initial feedback from seven volunteers and 12 service users in Dorset-based lunch clubs. The volunteers and service users found the design easy to understand and straight-forward to use (with or without volunteer) and found that the Nutrition Wheel was a 'friendly' way to have a conversation around nutrition. The students also developed an initial version of an advice/information sheet that could be given to any person likely to be at risk of undernutrition. The volunteers and service users found the signposting advice and the provision of national helpline numbers on this sheet helpful. See **Figure 1**.

The initial prototype developed by the students was further amended and sent to a professional design company. Following an educational grant from Nutricia, 100 copies were printed for piloting purposes. The information/advice sheet was also further developed and printed for piloting purposes. Bournemouth University ethics approval was granted for a research project to pilot the Nutrition Wheel. The Nutrition Wheel was piloted with 17 volunteers from community organisations across Hampshire and Dorset. Feasibility and acceptability of the Nutrition Wheel was evaluated through ten focus groups and interviews. Transcriptions from the interviews were analysed using thematic analysis. The research found that all the volunteers felt the Nutrition Wheel was an excellent conversation starter. However, the volunteers suggested that changes were required to address repetition in questions, make the wording less 'clinical' and simplify the advice sheet. Design changes were also required to add in question numbering and use contrasting colours (e.g. to help the text in the advice window to stand out). See **Figure 2**.

Figure 1: The Prototype



Figure 2: Pilot Version



With the help of the design company, the Nutrition Wheel was further amended into its final version. During this time, the Wessex AHSN was also in discussion with the Malnutrition Task Force (MTF), who agreed to adopt the Nutrition Wheel going forward, and launch the final version as part of their re-launch and re-brand later in 2019. In April 2019, Wessex AHSN ordered 50 of the final version Nutrition Wheels, along with five tear-off pads, to enable some final testing with volunteers in the Wessex region and beyond. The key changes made to the final version include:

- Addition of numbering on the questions to help guide the user in a systematic way
- Contrasting mustard colour to highlight the text in the advice window
- Change in the shape of the advice window to a wedge to reduce the number of corners and resemble a wedge of cake or cheese
- Inclusion of colour fading and contrast around the questions to improve the readability
- Simplification of the wording to help with understanding, reduce repetition and increase font size
- Inclusion of the Malnutrition Task Force logo. See **Figure 3**.

A Nutrition Wheel Toolkit has also been developed, which includes the Nutrition Wheel itself, the advice sheet (which has been made into tear-off pads), a general nutrition 'frequently asked questions' sheet, an explanatory guide, a simplified version of the explanatory guide more suited for volunteers, and the OPEN undernutrition leaflet (which was developed by the Wessex AHSN as part of their Older Peoples Essential Nutrition (OPEN) project). This leaflet is part of the Wessex AHSN OPEN toolkit (<http://wessexahsn.org.uk/OPEN-toolkit>) and is also available to download as a PDF from <http://wessexahsn.org.uk/open-leaflet>.

Who should be using the Nutrition Wheel?

To date, the Nutrition Wheel has only been tested with volunteers in lunch and activity clubs as part of the preliminary research. The Nutrition Wheel has also been shown to a variety of healthcare professionals during the development phase, and consultation sought on how it could be used in other settings in the community. The following are examples of where the Nutrition Wheel could be used in the community:

- By volunteers in a variety of settings, including lunch clubs, activity clubs, day centres, churches and events

- In waiting areas within GP practices, community clinics, community pharmacies
- In care homes for family/carers at open days and coffee mornings
- Dementia Advisors
- By wardens supporting people in assisted housing
- By other community services, e.g. shops, barbers, hairdressers and opticians.

Conclusions and next steps

Further work to test the Nutrition Wheel and associated Nutrition Wheel Toolkit will be carried out by the Wessex AHSN in collaboration with Bournemouth University, the MTF and the Patients Association in 2019, to understand how the Nutrition Wheel could be embedded as part of a new pathway for the early identification of undernutrition and signposting in community settings. It is planned for the Nutrition Wheel to be accessible as part of a toolkit via the MTF later in 2019.

As part of this ongoing work, we would also like to influence a call to action to include straightforward, easy-to-use tools, like the Nutrition Wheel and the Patients Association Nutrition Checklist, into the malnutrition pathways used in the community, e.g. 'Managing Adult Malnutrition in the Community'.

References: 1. Wilson L (2011). A review and summary of the impact of malnutrition in older people and the reported costs and benefits of interventions. London: Malnutrition Task Force. 2. National Institute for Health and Care Excellence (2006). Nutrition Support in Adults CG32. Accessed online: www.nice.org.uk/guidance/CG32 (Apr 2019). 3. National Institute for Health and Care Excellence (2012). Nutrition Support in Adults - Quality Standard 24. Accessed online: www.nice.org.uk/Guidance/QS24 (Apr 2019).

Figure 3: Final Version

