The Development of the Nutrition Wheel
1. In 2016, Wessex AHSN piloted the PaperWeight Nutrition Armbands with Age Concern Hampshire. The volunteers liked the interactive nature of the armbands, but were often not using it correctly (e.g. using it over clothes; not asking questions about unplanned weight loss). This highlighted the need for an interactive tool to act as a conversation starter that included the importance of asking questions to determine unintentional weight loss.
2. In 2017, a group of 7 healthcare students from Bournemouth University agreed to develop the Patients Association Nutrition Checklist into an initial prototype as part of their ‘Service Improvement Project’
3. The students **obtained some initial feedback** from 7 volunteers in lunch clubs and 12 service users in Dorset. The following feedback was received:

- Design was easy to understand and straightforward to use – with or without volunteer
- The Nutrition Wheel was a ‘friendly’ way to have the conversation
- The service users liked the signposting advice on the advice sheet, and especially liked the inclusion of national helpline numbers
4. The Nutrition Wheel was **further amended** with support from a professional design company. In early 2018, **100 were printed for piloting purposes**. An information/advice sheet was also produced.
5. Ethical approval received in early 2018 from Bournemouth University and the University of Southampton to validate the 4 key questions around the outer edge of the Nutrition Wheel against ‘MUST’ (Malnutrition Universal Screening Tool) – *these are the same 4 questions that make up Section A of the Patients Association Nutrition Checklist*

- 312 older people recruited from lunch and activity clubs in Hampshire & Dorset
- 22% of people ‘at risk’ using the 4 questions, compared to 9.9% of people ‘at risk’ using ‘MUST’. There were 4 people at risk according to ‘MUST’ but not identified by the 4 questions – however these people reported no change in weight and that they had always been slim
- The 4 questions have ‘moderate’ agreement with ‘MUST’ (*sensitivity: 85.4%, specificity: 87.1%*)
- The research concluded that the 4 questions were able to identify people who should be signposted to their GP / Practice Nurse for further advice and screening
6. **Bournemouth University Research Ethics approval received to pilot the Nutrition Wheel** in 2018 with 17 volunteers from community organisations across Hampshire and Dorset. Evaluation was carried out through 10 focus groups and interviews to understand the feasibility and acceptability of the Nutrition Wheel. Transcriptions from interviews analysed using thematic analysis.

- All volunteers felt the Wheel was an excellent conversation starter
- 5 volunteers gave positive feedback on the structure of the questions
- 4 volunteers felt that several questions were repetitive
- 3 volunteers felt the wording should be changed to make it less ‘clinical’
- Several volunteers suggested that design changes to make the Nutrition Wheel easier to navigate, e.g. the addition of question numbering and use of contrasting colours
- All volunteers liked the advice sheet, which provided a written copy of the advice given
7. Findings from the research informed the **development of the final version**. The Nutrition Wheel was launched in July 2019 in the Wessex region, and will be launched nationally in September through the Malnutrition Task Force.