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Abstract: Background

Measuring dietary intake is difficult and strategies which enable researchers to select the most appropriate dietary assessment tools (DATs) are needed. The aim of this work was to improve the quality of dietary data collected in epidemiological studies. Therefore, the DIET@NET partnership has created the Nutritools website, [www.nutritools.org](http://www.nutritools.org)

Methods

Development of the Nutritools website was divided into 3 strands. 1) Creation of Best Practice Guidelines (BPG), developed using the Delphi technique to obtain expert views. The BPG enable researchers to choose the most appropriate DAT for their work. 2) Creation of an interactive DAT e-library, with eligible DATs being identified through a systematic review of reviews that searched 7 databases. 3) Creation of an online interface between food tables and DATs that is the Food Questionnaire Creator (FQC). The work was guided by the DIET@NET partnership, a network of scientific experts.

Findings

The interactive Dietary Assessment Guidelines, were generated from feedback by 57 international experts. 43 guidelines and a summary of the strengths and weaknesses of the dietary assessment methods were included. The DAT e-library included data for 62 UK validated tools. These were obtained from 43 systematic reviews identified. The tool library will provide in-depth information regarding the tools, validation study characteristics, and results. This information is also provided visually through bubble and summary plots, allowing easier comparison between the DATs. The FQC, was based on the principles of common food frequency questionnaires, and allows users to create and develop new online food questionnaires. Users can map their online questionnaires to the latest

UK food database (McCance and Widdowson's Composition of Foods 7th Ed). The FQC will also host a number of validated DAT that have been adapted for online use.

#### Interpretation

The DIET@NET partnership has created a unique dietary assessment reference website, [www.nutritools.org](http://www.nutritools.org) (live from autumn 2017) using expert guidance and systematic review. The website allows visual comparison of DATs and hosts validated, interactive DATs. The BPG assists researchers in selecting the most appropriate DAT for their study. Researchers can access validated DATs through the DAT e-library, and create their own using the FQC.

# Abstract

## Development of an interactive dietary assessment tools website (Nutritools) for use in health research

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## **Contributors**

JEC supervised the DIET@NET study and is the principal investigator. MWM is the project manager and wrote the abstract with input from the DIET@NET consortium. MWM, JH, NH, NAA, AN, PAW, BM, SR, TS, PP, PF, TK, and JEC contributed to the development of the Nutritools website. All authors have seen and approved the final version of the Abstract for publication.

## **Conflicts of interest**

The authors declare no conflicts of interest. The University of Leeds is establishing a spin out company myfood24, for our new on-line dietary assessment tool. Professor Janet Cade is a director and shareholder of myfood24.