

Evaluation of undergraduate medical education “Primary Care Culinary Medicine” course innovation

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Problem:

- **11 million deaths** and **255 million Disability-Adjusted Life Years (DALYs)** were attributable to dietary risk factors (GBD 2017 Diet Collaborators, 2019).
- Growing body of evidence that medical students globally recognise the value of nutrition and dietary intervention in clinical care
- There is currently an unmet need for teaching in this area in the majority of medical schools.
- Our aim was to evaluate student satisfaction and perception of our new Culinary Medicine in Primary Care course to assist with curriculum development and to assess any changes in self perceived confidence in nutrition clinical skills.

Who should address the burden of poor diets?

Diets across the UK need to improve.

- All age groups are consuming at least twice as much free sugar as recommended
- Only 18% of children are eating five portions of fruit and vegetables every day
- 64% of adults are overweight or obese

Sharing the burden of poor diets amongst healthcare professionals may help combat one of the biggest health challenges facing the population.

DIETITIANS
DOCTORS

● = 5,000 professionals

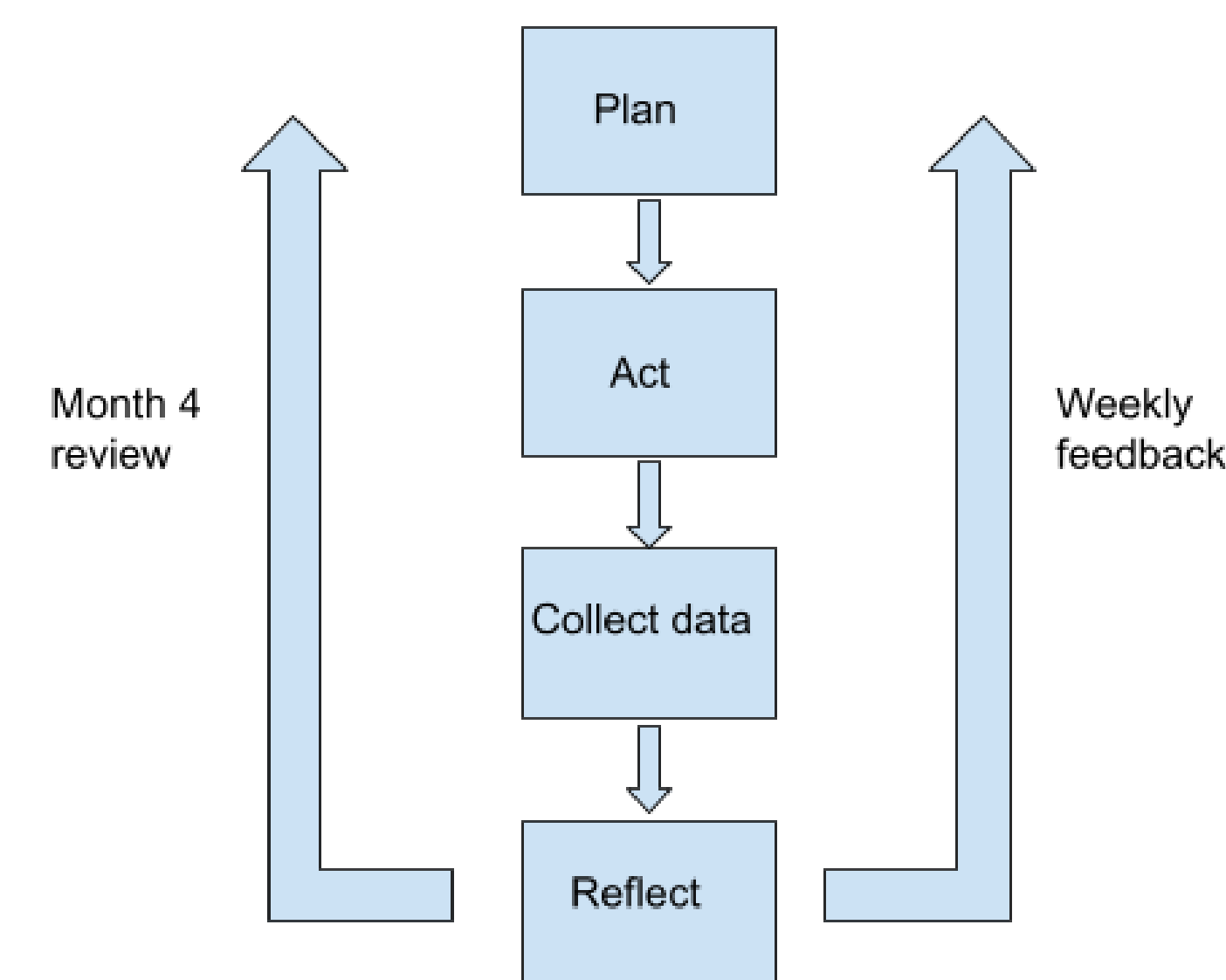
Developed by CMUK

Figure 1: Who Should address the burden of poor diets? Developed by Culinary Medicine UK

Approach:

1. A learning needs assessment was carried out and analysed prior to the development of this course (Xie et al, 2020).
2. Students completed an online questionnaire after their face-to-face workshop for the first two terms of the academic year 2019/21. A variety of question styles were used: Likert-type, multiple choice and free text.
3. Quantitative analysis of Likert-type and multiple choice questions was carried out to compare student confidence in nutrition skills pre and post workshop.

Figure 2: Process of Curriculum Development



1. Qualitative thematic analysis was used to analyse free text responses and identify themes for improvements. Iterative improvements to the curriculum were made using an action research model to incorporate student and facilitator reflections.

Findings:

- Student's confidence in nutrition assessment skills increased from 48% to 80% and confidence to discuss nutrition with patients from 20% to 59% comparing data from the needs assessment to post attendance.
- Two core themes for most useful and positive aspect of the course:
 - the quality of the teaching from the multidisciplinary teaching team:
 - “Change from didactic learning and more engaging”
 - “Very interactive, good balance of cooking and lecture-style teaching”
 - clinical relevance:
 - “High relevance to our future clinical practice - can definitely imagine myself using the techniques”
- However, some students wanted:
 - A clearer link to student assessment:
 - “Knowing exactly where we will be assessed”
 - A wider range of advice for specific clinical conditions:
 - “Could be useful to have some more examples of diet advice for patients with specific health conditions (other than diabetes)”
 - “Perhaps more mention on eating disorders and allergy as these are very topical and important!”

Implications:

- Our findings show the efficacy and acceptability of a hands-on “Primary Care Culinary Medicine” course in meeting students' nutritional education needs.
- Utilising student and facilitator feedback helps to develop novel, short, practical and clinically focused nutrition teaching.
- There is potential to replicate this model across other medical schools to enable future doctors to better identify and support the nutritional needs of patients with chronic diseases and multi-morbidity.

Limitations:

Our response rate was low, limiting the generalisability of the study. 180 students completed the learning needs assessment survey.

Conclusions:

The CM course described in this study is the first of its kind at a UK medical school. The findings will help to inform how CM teaching can be introduced more widely to the undergraduate medical curriculum. It is important to note that the course continues to evolve and adapt. Unforeseen circumstances such as the COVID-19 pandemic have meant that learning has been adapted to run online. This has brought new challenges in order to maintain the practical elements of the course. However, the course continues to provide a unique opportunity to discuss professional, clinical and ethical issues, which are central to the in-person hands on cooking experience.