

Nutrition at the Frontline: A Systems Approach to Enhancing Public Health through Pharmacy Practice

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Nutrition, health and food systems



Unhealthy diets, obesity and nutrition-related NCDs are closely associated with the food systems.

Connected with a rise in obesity and NCDs, it's crucial that the food systems should be transformed with the aim of improving the health of the people and the planet.

holistic, interdisciplinary and systemic approach to food and health systems to make sure these systems work synergistically to bring about effective

food systems transformation in terms of providing nutrition-specific interventions, as well as in the prevention, treatment, and management of diet-related NCDs,

Integration of Nutrition into Pharmacy Practice

- **Community pharmacies at the heart of public health**
- **Healthy Living Pharmacy Framework**
- **Fit for the Future: 10 Year Health Plan for England**
- **The expanding role of pharmacists**
- **The integration of nutrition into healthcare services is becoming increasingly important.**

Gap in research

- **Nutrition advice and nutrition/diet-related services in pharmacy practices?**
- **Knowledge and practices of pharmacy professionals in the delivery of nutrition counselling?**
- **How to best integrate nutrition into this setting?**



Mixed-methods methodology

Mixed-
methods
survey



Qualitative
Interviews &
Focus Groups



Patient &
Public
Involvement



Co-design
workshops

Nutrition
toolkit design



Knowledge, Attitudes and Practices of Pharmacy Professionals Towards the Provision of Nutrition Counselling and Diet-related Advice



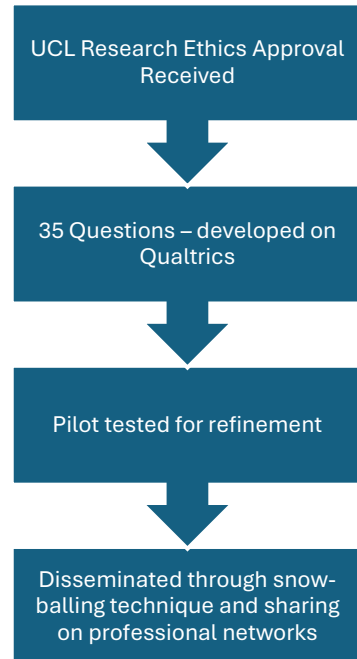
Online mixed methods questionnaire (N=220) to evaluate pharmacy professionals' nutrition knowledge, advice given in various diet-related conditions, diet-related guidance given within their routine practice and perceived roles and future ambitions of pharmacy professionals towards nutrition counselling.



Exploring nutrition knowledge and the content of the advice provision in a variety of cases including sustainable diets, overweight and obesity, nutrition-related NCDs, malnutrition, micronutrient deficiencies

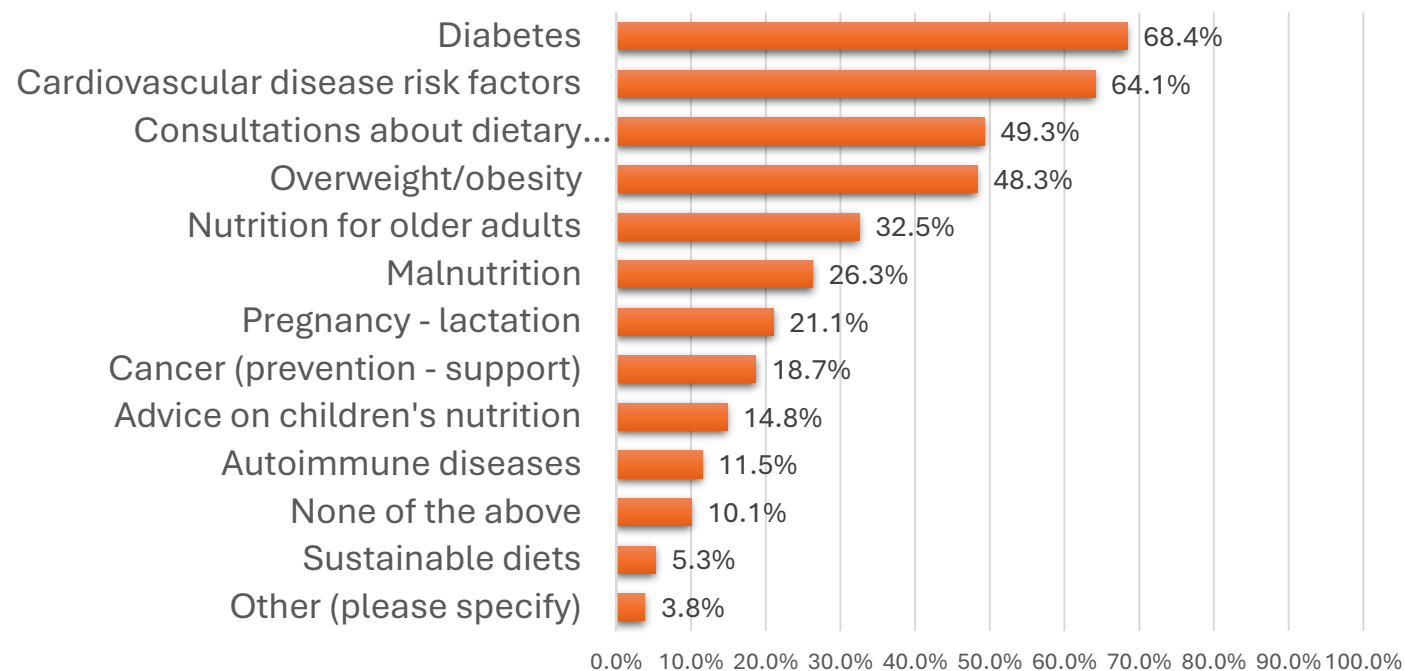


Qualitative exploration around how they perceive their role in promoting public health nutrition through thematic analysis of open-text answers – exploring barriers and facilitators

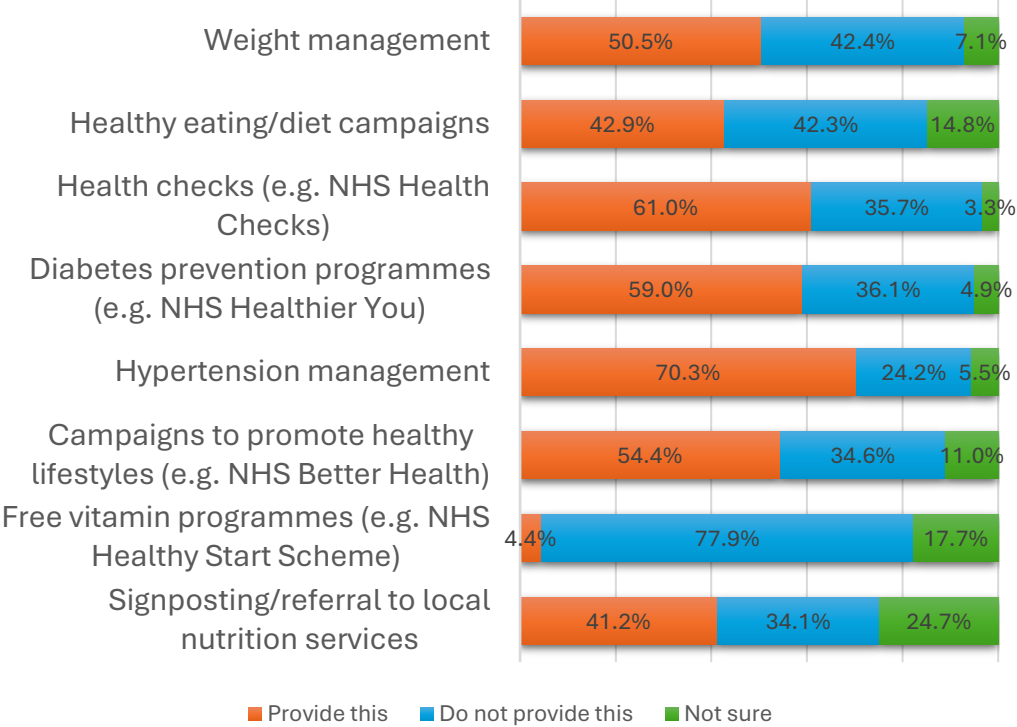


Topics that nutrition/diet advice is being provided (n = 220)

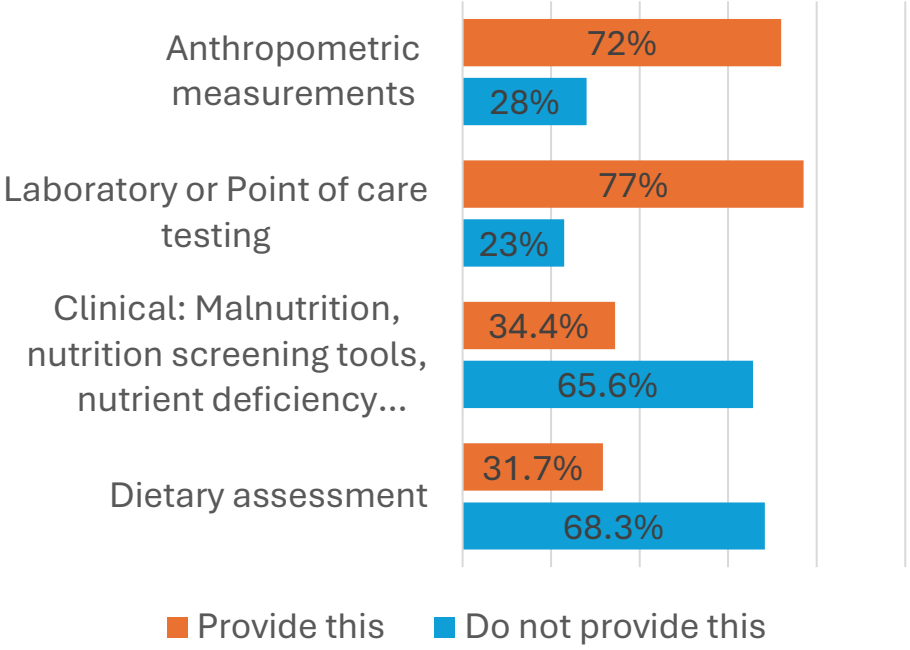
The majority of the topics that pharmacy professionals provide nutrition advice to patients on are diabetes, hypertension, hyperlipidaemia and cardiovascular diseases (CVDs) risk factors, followed by consultations on dietary supplements and overweight/obesity.



Provision of Nutrition-related Services in Practice



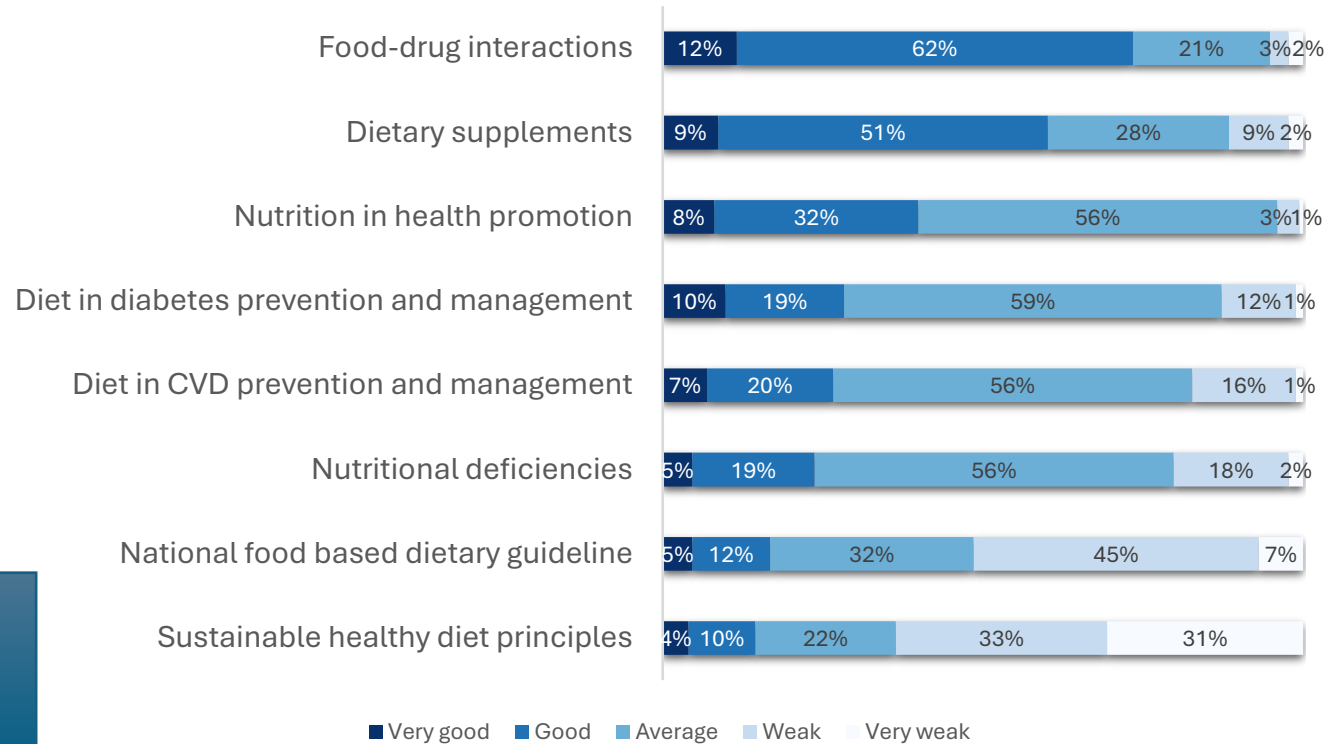
Provision of Nutritional Assessment Methods in Practice



Knowledge Levels

- Average knowledge of nutrition in health promotion, nutritional deficiencies and the role of diet in diabetes and CVDs.
- Weak knowledge of national food-based dietary guidelines.
- Knowledge related to sustainable healthy diet principles showed the lowest ratings overall.

Confidence rating questions revealed a **significant gap in training and a clear need for educational materials tailored for pharmacists** to enhance their ability to provide nutrition advice effectively.



Association Between Perceived Knowledge and Delivery of Nutrition Advice



Overweight / Obesity

$p < 0.001$ | Cramer's V = 0.327

trend $p < 0.001$

↑ Strong, significant association,
significant linear trend



Malnutrition

$p = 0.009$ | Cramer's V = 0.221

trend $p = 0.003$

↑ Significant linear trend

Higher perceived knowledge → Higher provision of nutrition advice

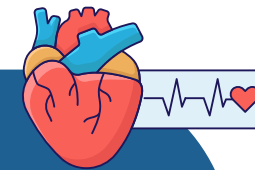


Diabetes

$p = 0.015$ | Cramer's V = 0.210

trend $p = 0.004$

↑ Significant linear trend



Cardiovascular diseases

$p = 0.014$ | Cramer's V = 0.210

trend $p = 0.012$

↑ Significant linear trend

Thematic framework of pharmacy professionals perceived roles and future ambitions in nutrition care



Nutrition Advice in Pharmacy Practice: Views of the Experts (Interviews/Focus Groups for Developing a Nutrition Toolkit for Pharmacy Practice)



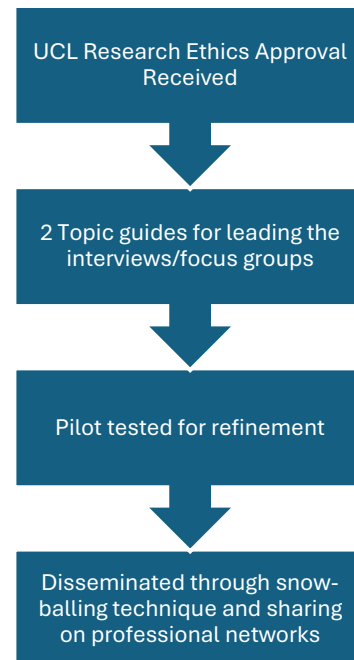
Qualitative interviews and focus group discussions (N=19) with pharmacists, nutritionists and dietitians to gather insights to develop a comprehensive nutrition toolkit tailored for pharmacy practice.



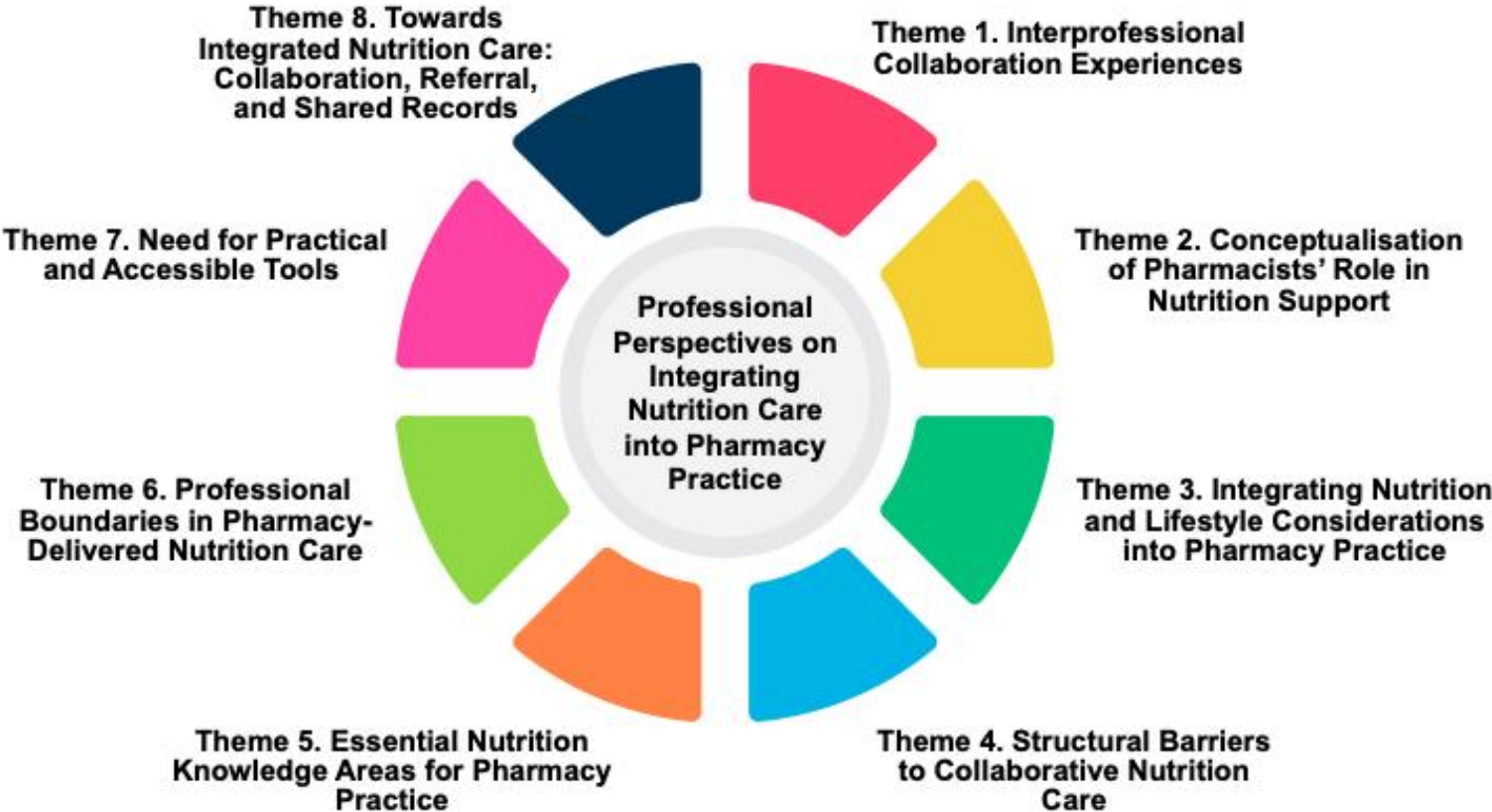
Two different topic guides were designed and pilot-tested for refinement, one for the pharmacy professional group, and the other for nutrition professionals.



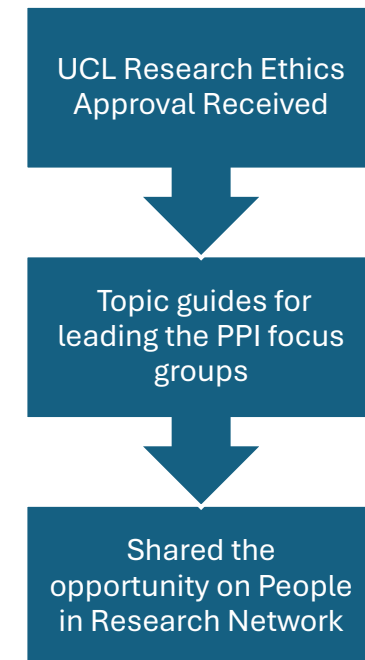
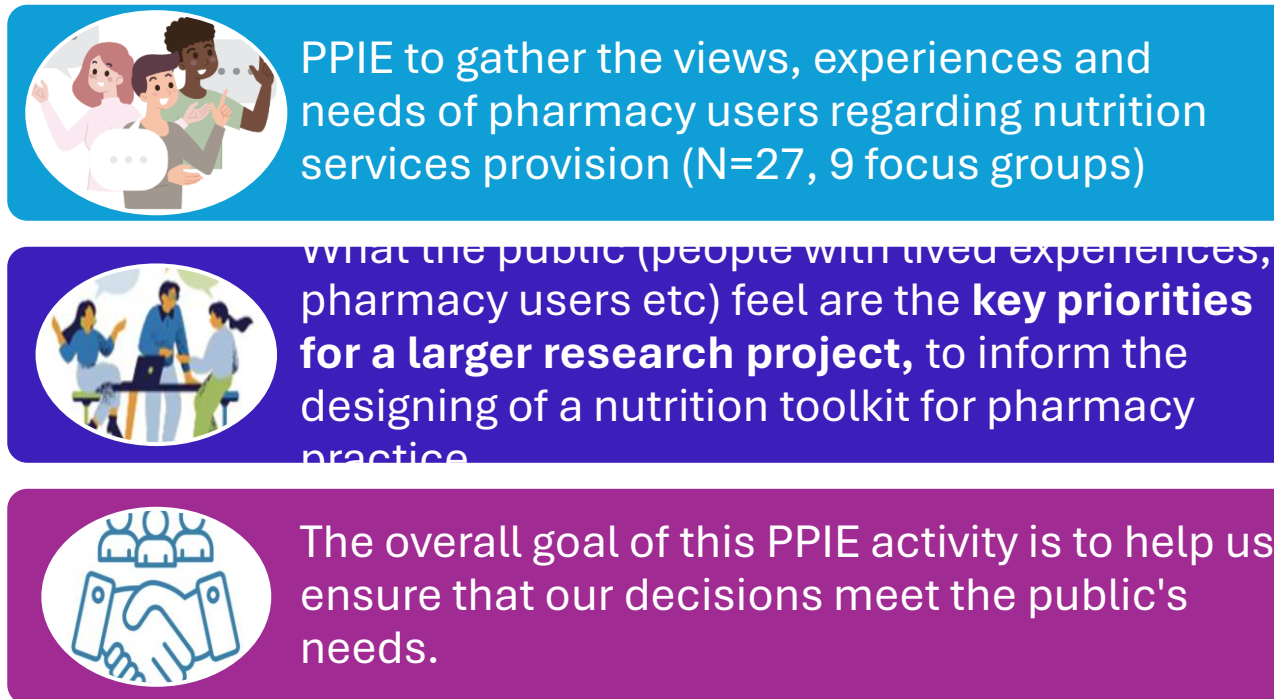
Thematic analysis was conducted, and emerging themes and subthemes were identified, with illustrative quotes.

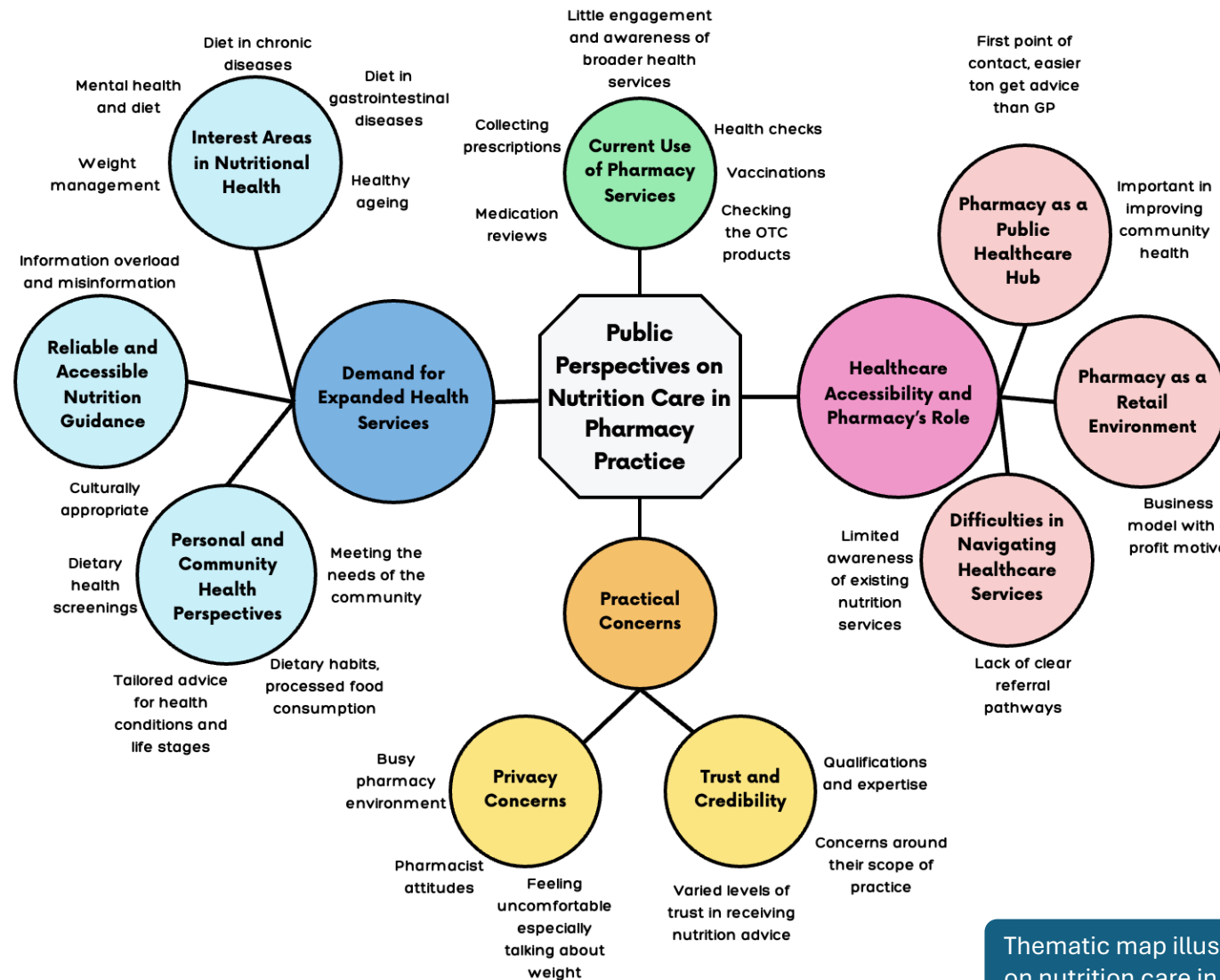


Thematic Analysis of Qualitative Interviews



Patient and Public Involvement and Engagement (PPIE) Focus Groups for the development of a nutrition toolkit





Thematic map illustrating public perspectives on nutrition care in pharmacy practice

“I’ve had osteoarthritis for years, and no one ever mentioned nutrition... It was always medication first. I had to search for advice myself, and it made a big difference. So, I think pharmacy professionals are looking differently at how they treat people because the resources aren’t there for them.”
(A, 65, patient with osteoarthritis)

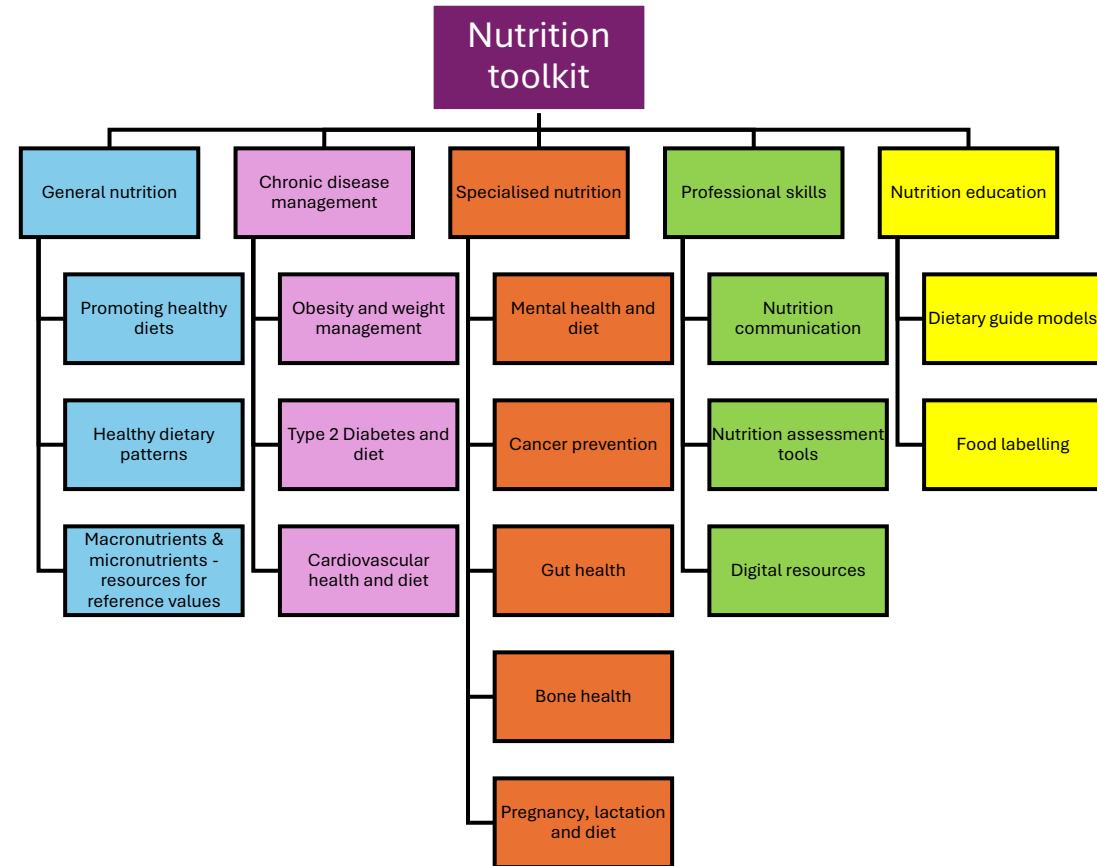
“Pharmacists are expanding their responsibilities, and I think that’s great, but I do have concerns about their scope of practice and regulation if they overstep... I would want to know how they’re trained... where their knowledge is coming from. Nutrition is controversial... if it’s NHS-trained, that gives you more trust.”
(M, 70, patient with an autoimmune disease)

“Pharmacies were the hub during COVID. The engagement levels with the community skyrocketed. That shows what they’re capable of. There’s potential for pharmacists to lead public health programmes. People want that kind of information.”
(C, 55, patient with gastrointestinal diseases)

“My concern is that pharmacies are there to make a profit... health promotion and making people healthier might actually take away their customer base.”
(P, 45, patient with respiratory disease)

Co-design Workshops To Design A Nutrition Toolkit For Pharmacy Practice

- Developing a **nutrition guidance toolkit** through **collaborative workshops** with dietitians, nutritionists and pharmacy professionals (n= 16).



Prioritising Toolkit Topics: Feasibility & Importance Survey and Priority Matrix

Top Priority

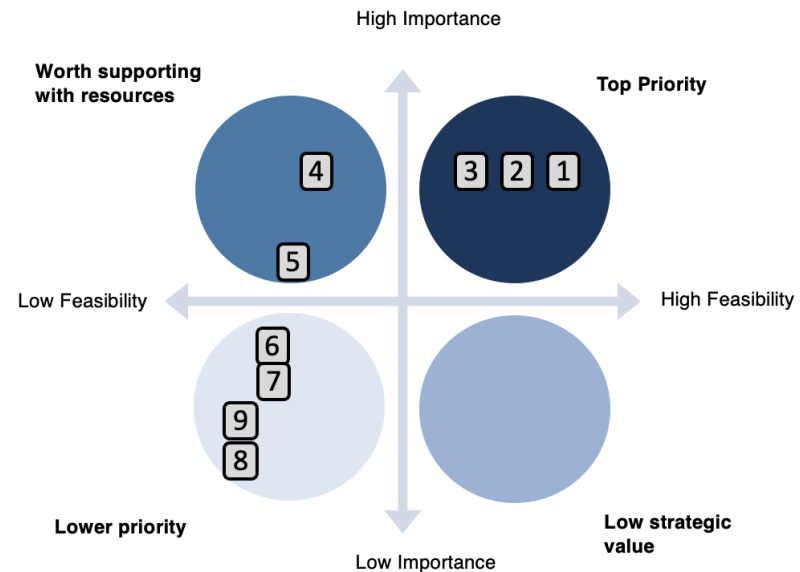
- **High Feasibility + High Importance**
- Implement first — high impact and practicality
(e.g. Signposting to nutrition support, fibre education, balanced diets)

Worth Supporting with Resources

- **Moderate Feasibility + High Importance**
- Good opportunities but may require additional support or training
(e.g. Mediterranean diet, macronutrient basics)

Lower Priority

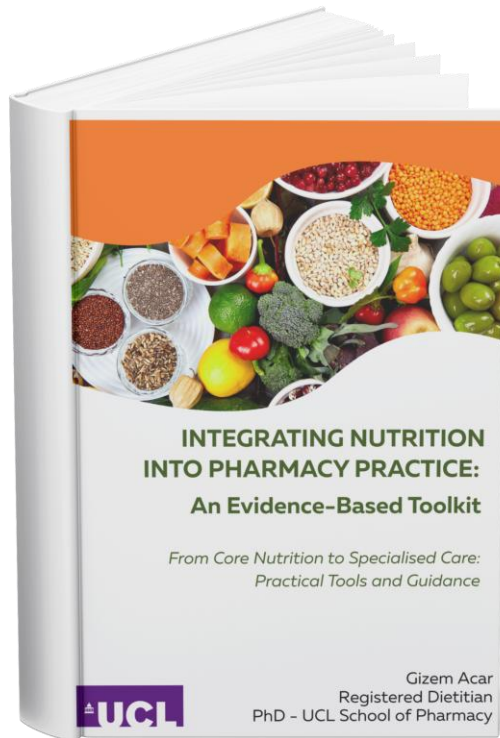
- **Low Feasibility + Moderate/Low Importance**
- Consider later or when specific needs and resources arise
(e.g. plant-based diet guidance, protein swaps, sustainable meal ideas)



| Top Priority | |
|---------------------------------|--|
| 1 | Signpost to community nutrition support |
| 2 | Educate on fibre intake |
| 3 | Provide guidance on balanced diets |
| Worth Supporting with Resources | |
| 4 | Promote the Mediterranean diet |
| 5 | Include macronutrient & micronutrient basics |
| Lower Priority | |
| 6 | Provide plant-based diet guidance |
| 7 | Offer protein swap options |
| 8 | Share budget-friendly, sustainable meal ideas |
| 9 | Provide simple, practical recipes for healthy eating |

Toolkit development

1. Core Nutrition Concepts: Healthy Nutrition / Nutrition in Health Promotion
2. Obesity and Weight Management
3. Diabetes and Diet
4. Cardiovascular Health and Diet
5. Specialised Nutrition Topics
6. Professional Skills and Communication in Nutrition Care
7. Nutrition Education and Resources

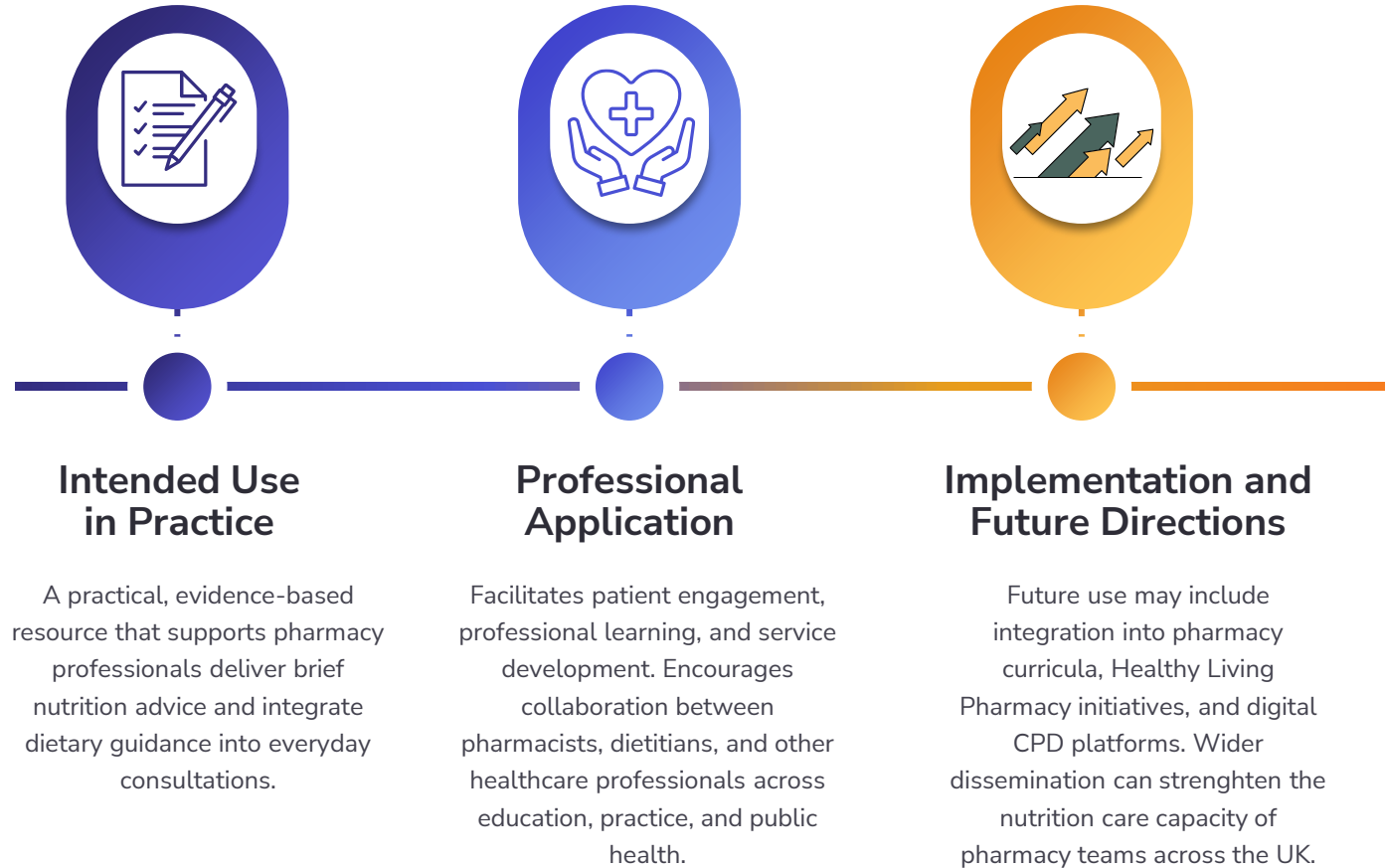
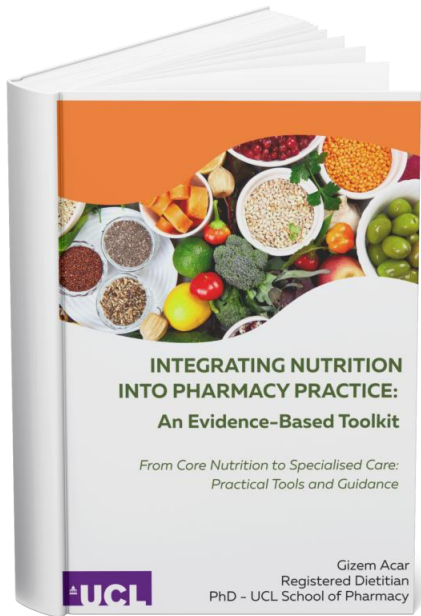


✓ Key dietary guidance, screening and assessment tools, professional resources, and links to national and international frameworks

Stepwise Framework for Practice:


Prepare → know where to signpost, have key resources ready.

1. **Ask & Categorise** → explore the reason for the visit; identify potential nutrition touchpoints.
2. **Assess (ABCDE)** → simple overview of anthropometric, clinical, dietary, and lifestyle factors, plus medication–nutrition considerations.
3. **Engagement Prompt** (*mnemonic under development: PASS, STEP, ACTS*) → gain permission, acknowledge importance, suggest small steps, and signpost.
4. **Brief Advice** → share one clear, evidence-based recommendation.
5. **Agree on a SMART Goal** → collaborate with the patient to define achievable goals.
6. **Support & Signpost** → provide trusted materials, leaflets, or QR codes to reputable sources.
7. **Arrange & Empower** → encourage follow-up or referral when appropriate, reinforcing patient self-efficacy.





THANK YOU FOR
YOUR TIME!

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Transforming UK Food Systems Conference, 23-24 March 2026



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