The role of pharmacists in strengthening patient care, trust, and adherence in adult specialised nutrition

Report from a FIP insight board

2026

FIP Development Goals

fip International Pharmaceutical Federation

Colophon

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Contents

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The content of this report has been produced independently by FIP.

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FIP expresses gratitude and appreciation to all the insight board participants. The list of contributors is available in section 2.

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1 Introduction

Background on adult specialised nutrition

Adult specialised nutrition support plays a critical role in the care of patients with malnutrition and other clinical conditions, including frailty, gastrointestinal disorders and cancer recovery pathways. As healthcare systems increasingly shift towards preventive and patient-centred models of care, nutrition is recognised as a key component of health management and improved clinical outcomes.[1, 2] Given pharmacists' frequent and accessible contact with patients in community and other care settings, they are well placed to contribute to the early identification and ongoing support of patients at nutritional risk.

Malnutrition refers to a state in which a deficiency of energy, protein and/or other nutrients leads to measurable adverse effects on body composition, physical function or clinical outcomes. It is both a cause and a consequence of ill health and is associated with increased vulnerability to disease (communicable and non-communicable), poorer recovery and greater healthcare needs. It can occur across a wide range of clinical and social circumstances and is particularly common among older adults, individuals living with chronic or progressive diseases, people recovering from acute illness, and those experiencing social or functional vulnerability. Malnutrition is commonly described as encompassing undernutrition, micronutrient-related malnutrition, and overweight/obesity.[3]

For the purpose of this report, the focus is on undernutrition and disease-related malnutrition in adults.

Adult specialised nutrition refers here to nutritional interventions, strategies and products designed to support patients who are unable to meet their nutritional requirements through usual dietary intake alone, particularly in the context of disease-related malnutrition and other clinical conditions.

Pharmacists are increasingly recognised as important contributors to adult specialised nutrition through the identification of patients at risk of malnutrition, patient education, support for adherence to nutritional interventions, and collaboration with other healthcare professionals across the continuum of care. Their accessibility and frequent contact with patients position them to contribute to early identification, referral, ongoing monitoring and follow-up, as part of multidisciplinary nutritional care.

Forms of adult specialised nutrition support

Specialised nutrition support for adults may encompass oral nutrition support, enteral tube feeding and parenteral nutrition, provided under healthcare professional guidance and selected according to the patient's gastrointestinal function, clinical condition and ability to meet nutritional requirements through usual dietary intake.[1, 2]

Oral nutrition support is used when a patient retains the ability to eat and swallow safely but cannot meet their nutritional needs through food alone. It ranges from simple measures, such as fortified foods, nourishing drinks and additional snacks, to oral nutritional supplements (ONS).[1, 2] ONS are sterile liquids, semi-solids or powders that provide macronutrients (protein, carbohydrate and fat) and micronutrients (vitamins, minerals and trace elements).[4] Many ONS are nutritionally complete when consumed in the recommended amounts, although their composition varies according to the intended clinical use. They are used in both acute and community care settings, either in the short term during acute illness or over the longer term for chronic conditions, to complement rather than replace usual dietary intake.[4]

Where oral intake alone is insufficient or unsafe, enteral tube feeding may be used. This involves delivering a nutritionally complete feed directly into a functioning gastrointestinal tract via a tube and is indicated for patients who have a functional gut but are unable to swallow safely or meet their nutritional requirements by mouth.[1, 2]

Parenteral nutrition involves the intravenous delivery of nutrients and is reserved for patients in whom enteral feeding is not feasible or is inadequate, such as those with intestinal failure. Given its greater clinical complexity and associated risks, it is used only under specialist supervision.[1, 2]

The choice of nutrition support depends on the patient's clinical condition, gastrointestinal function and ability to meet nutritional requirements through oral intake, with oral, enteral and parenteral approaches used alone or in combination, as clinically appropriate.[1, 2]

Types of oral nutritional supplements

Oral nutritional supplements (ONS) are available in a range of formulations that differ in nutritional composition, energy density, serving volume, texture, flavour and presentation, allowing nutritional support to be tailored to the diverse needs of patients with, or at risk of, malnutrition.[5, 6] Most ONS are supplied as ready-to-drink liquids, although powdered and semi-solid products, such as puddings, are also available. Formulations include high-protein, fibre-enriched and disease-specific products, as well as milk-based, juice-style, yoghurt-style and savoury options, and texture-modified products suitable for individuals with dysphagia.[7] ONS selection should be individualised by considering both patient-related factors, including clinical condition, nutritional status, functional ability, treatment burden, preferences, and goals of care, as well as product-related factors, such as formulation, serving volume, palatability, and ease of consumption. Evidence suggests that matching ONS characteristics to individual patient needs and preferences using a person-centred approach may improve adherence and optimise nutritional care outcomes.[5, 6]

Different formulations are designed to meet specific clinical needs, including high-protein products for patients with cancer or frailty, or for those with increased nutritional requirements during wound healing, renal-specific formulations when clinically indicated in chronic kidney disease, fibre-containing products when bowel function is a concern, peptide-based products for malabsorption, and thickened products for dysphagia.[4]

Sensory characteristics are also among the most influential product-related determinants of ONS adherence. Taste, flavour, texture, mouthfeel, aroma, appearance, and overall palatability influence patients' willingness to initiate and continue supplementation, whereas unpleasant sensory attributes may contribute to taste fatigue, reduced satisfaction, and premature discontinuation. Offering a choice of flavours, textures, and formulations may improve product acceptability, reduce flavour fatigue, and support long-term adherence to nutritional interventions, highlighting the importance of incorporating patient preferences into product selection.[5, 6, 8]

Role of pharmacists in strengthening adherence

Higher adherence to ONS is associated with improved nutritional intake and better clinical outcomes, including improvements in nutritional status and reductions in disease-related complications and healthcare utilisation, with the greatest benefits generally observed when adherence exceeds approximately 80%.[9, 10] However, adherence is influenced by a complex interaction of patient-, product-, healthcare professional-, and healthcare system-related barriers. Common barriers include poor health status, treatment burden, gastrointestinal symptoms, poor palatability, taste fatigue, lack of motivation, inadequate patient education or follow-up, and organisational factors affecting ONS prescribing and monitoring. Addressing these barriers through individualised ONS selection, shared decision-making, patient education, and regular monitoring is therefore essential for maximising adherence and improving clinical outcomes.[5, 6]

Pharmacists, across both community and hospital settings, play an increasingly important role in supporting patients throughout the nutrition care pathway. In adult specialised nutrition, their role extends beyond dispensing to include identifying patients at risk of malnutrition or disease-related malnutrition, supporting the initiation of nutritional interventions, promoting long-term adherence, and providing practical guidance for day-to-day patient management.[11, 12] This may include supporting older adults, people living with frailty, cancer, gastrointestinal disorders, poor appetite, dysphagia, or other conditions associated with reduced nutritional intake, involuntary weight loss or increased nutritional requirements.

FIP insight board

Despite the growing contribution of pharmacists to adult specialised nutrition, important questions remain about how consistently this role is implemented across healthcare systems and what is needed to enable pharmacists to contribute more effectively. Patients often have limited understanding of their nutritional

needs and rely on healthcare professionals for guidance and ongoing support, while adherence to nutritional interventions remains a significant challenge.[2]

In this context, pharmacists are very well positioned to bridge any gaps between clinical recommendations and the effective implementation of adult specialised nutrition interventions in practice. However, their ability to contribute fully to patient care varies considerably depending on their level of training, knowledge and confidence, the clarity of professional guidance, access to practical tools and patient education materials, and the extent of integration and collaboration within the broader healthcare system.[11]

There is currently limited international understanding of how pharmacists perceive and implement their role in adult specialised nutrition, the challenges they encounter, and the education, tools and system-level support required to strengthen practice. Existing evidence also suggests that pharmacists would welcome additional education and training in adult specialised nutrition to strengthen their knowledge, confidence and ability to support patients requiring nutritional care.[12,13]

Although adult specialised nutrition encompasses oral, enteral and parenteral nutrition support, this insight board focused primarily on oral nutrition support, including oral nutritional supplements, as these are among the forms of nutritional support most commonly encountered by pharmacists across a range of practice settings and where pharmacists can make a particularly important contribution to patient education, adherence and ongoing support.

To explore these issues and identify opportunities to strengthen pharmacy practice, FIP convened a virtual insight board bringing together pharmacists from different European countries and practice settings, including community and hospital pharmacy. Participants were invited to draw on their experience in adult specialised nutrition and to share their perspectives on pharmacists' current and potential roles, key challenges, and priorities for strengthening practice in this area.

Participants contributed through the live virtual discussion, written responses to the discussion questions, or both. The discussion was guided by a set of questions (see below). Contributions from the discussion and written responses were reviewed to identify common perspectives, differences across countries and practice settings, and key opportunities for action.

The draft report was subsequently shared with participants to review the sections reflecting their contributions and to ensure that their perspectives had been accurately represented.

The insight board aimed to:

- explore how pharmacists across different European countries perceive their role in adult specialised nutrition and its impact on patient outcomes;
- examine how pharmacists support patients at key moments along the care journey, including identification, initiation, and adherence to adult specialised nutrition;
- determine education and resource needs that can support pharmacists to confidently manage patients requiring adult specialised nutrition;
- identify barriers and enablers affecting pharmacists' ability to play this role effectively; and,
- identify opportunities for professional bodies such as FIP to strengthen the role of pharmacy in adult specialised nutrition support and patient care.

Insight board questions:

1. Experience and role in specialised nutrition
    - How is specialised nutrition currently integrated into your pharmacy practice, and what patient needs or challenges do you most commonly encounter?
    - How confident do you feel in supporting patients requiring specialised nutrition?

2. Patient journey and pharmacist impact
    - At which stages of the patient journey can pharmacists have the greatest impact (e.g., identification, initiation, adherence)?

- How do you currently support patients beyond the initial recommendation, including through collaboration with other healthcare professionals?

3. Barriers and enablers
   - What are the main barriers limiting pharmacists' ability to support patients effectively in specialised nutrition?
   - What types of support from manufacturers, healthcare systems or professional bodies would most strengthen pharmacists' contribution in this area?

4. Tools, training and support needs
   - What tools, information or training would most improve pharmacists' ability to support patients requiring specialised nutrition?
   - What would enable pharmacists play a more proactive role in identifying and supporting patients?

5. Looking ahead
   - What would an effective specialised nutrition pathway look like within community pharmacy practice?
   - How should organisations such as FIP support pharmacists to strengthen their role in this area?

This report summarises the insight board discussions and the key perspectives shared by participants. The views expressed reflect the expertise and experiences of the contributors and do not necessarily represent FIP's formal policy positions. The insights gathered will inform future FIP guidance, education and advocacy, helping to strengthen pharmacists' contribution to adult specialised nutrition and support more person-centred, evidence-based nutritional care worldwide.

2 Insight board participants

Moderators	
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Team members (note takers)	
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Piotr Merks	Professor, Faculty of Medicine, Lazarski University	Poland
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Participants who submitted written responses		
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3 The role of pharmacists in adult specialised nutrition

This chapter explores how adult specialised nutrition is currently integrated into pharmacists' practices across participating European countries, the patient populations and nutritional needs pharmacists most commonly encounter, and pharmacists' confidence in supporting patients with specialised nutrition. The discussion highlights how pharmacists' roles vary across different healthcare systems, reflecting differences in regulatory frameworks, models of care and professional practice.

3.1 Current practice and common patient needs

The integration of adult specialised nutrition into pharmacy practice varied considerably among the participating countries. In some countries, pharmacists play an active role in identifying, counselling, and following up patients, while in others, involvement remains limited to reassurance once a product has already been selected by a physician. In Poland, for example, adult specialised nutrition was described as not yet being systematically integrated into routine community pharmacy practice, with most interventions remaining product-focused rather than pathway-based. In Greece, oral nutritional supplements are mainly prescribed by physicians, and pharmacists are often not involved in the decision-making process, with patients or caregivers typically arriving at the pharmacy with the product already selected.

"Most usually these products are prescribed or recommended by doctors."

Participants identified a broad and overlapping set of patient populations who require adult specialised nutrition support. These included patients with cancer, including those in palliative care, people with chronic diseases such as diabetes, chronic obstructive pulmonary disease (COPD), chronic wounds and impaired renal function, older adults and patients with frailty, patients with neurological disorders, patients with dysphagia, and patients with poor appetite linked to illness. Some participants also reported providing nutritional advice to other groups, including individuals seeking sports nutrition and adults managing stress and busy lifestyles. Caregivers were also highlighted as key partners in nutritional care, as they frequently approach the pharmacy on behalf of patients and play an important role in supporting adherence to nutritional interventions. The participant from Portugal described how nutrition has become an increasingly important part of community pharmacy practice, with growing demand for nutritional advice across a wide range of patient groups:

"Almost 10 years now, nutrition has been gaining more and more space in community pharmacists regarding sales and regarding the counselling that people require from us."

The participant from Denmark highlighted the important role of community pharmacists in identifying patients at risk of disease-related malnutrition, reflecting the wide range of patient groups encountered in daily practice:

"In my daily practice in community pharmacy, I frequently meet patients who are at risk of disease-related malnutrition, particularly older adults, patients with cancer, COPD, neurological disorders, dysphagia, and those with poor appetite."

Practice settings shaped the type of support provided. In hospital settings, participants described specialised, multidisciplinary involvement, including the management of parenteral nutrition for patients with acute or chronic intestinal failure, delivered by pharmacists working alongside gastroenterologists, dietitians and specialist nurses. In community settings, participants more commonly described supporting patients using oral nutritional supplements, including guidance on product selection, texture and consistency, and how products should be used in practice—for example, whether they are intended to replace a meal, supplement normal food intake, or be taken at specific times of day. One participant from Spain highlighted the importance of providing practical counselling to help patients integrate adult specialised nutrition into their overall treatment plan, noting that an integrated pharmaceutical and nutritional approach is becoming increasingly important in community pharmacy practice:

"Many patients need guidance on how adult specialised nutrition interacts with their medications, the most appropriate timing of nutritional supplements, and how nutrition can improve treatment outcomes and quality of life."

Regulatory and funding pathways for adult specialised nutrition products also varied among the participating countries. In Spain, these treatments are generally fully funded by the public health system for patients who meet specific clinical criteria.

"These treatments are generally fully covered (usually 100% funded) by the public health system, provided the patient meets specific clinical criteria."

In Sweden, oral nutritional supplements are prescribed mainly by dietitians and, in some cases, physicians, and are increasingly distributed through e-commerce platforms rather than pharmacies.

"ONS are handled as an advanced healthcare tool and are prescribed mainly by dietitians and, in some cases, physicians, then distributed through new e-commerce platforms."

In Switzerland, adult specialised nutrition is not yet fully integrated into practice. The participant also highlighted the need to raise awareness among both healthcare professionals and patients and identified reimbursement through health insurance, which requires specific authorisation, as an important barrier to access.

"It is still far from being fully integrated. We should raise awareness of its importance by both healthcare professionals and patients."

3.2 Pharmacists' confidence in supporting adult specialised nutrition

Participants reported varying levels of confidence when supporting patients who require adult specialised nutrition support. Confidence varied among the participants from various countries and practice settings and was closely linked to experience, specialisation and access to appropriate support. Pharmacists working in specialised hospital nutrition teams generally described feeling confident in their day-to-day practice, while continuing to refer patients with more complex dietetic needs or requiring enteral feeding to dietitian colleagues.

"I have been working in this field for 20 years so feel quite confident. If there are areas of specialist dietetics or when patients need enteral feeding, I would refer to one of my dietitian colleagues."

In community pharmacy, participants from Denmark and Norway also reported high levels of confidence, particularly in relation to patient education, follow-up and practical guidance. Confidence was attributed to a combination of professional experience, personal interest in nutrition, access to up-to-date product knowledge, and clear professional guidance. These participants also emphasised the importance of recognising the limits of the pharmacist's role, referring patients with complex medical conditions, significant weight loss, swallowing difficulties or uncertain causes of poor nutritional intake to general practitioners or dietitians when appropriate.

Reflecting these views, the participant from Norway commented:

"I feel quite confident in being able to guide my customers/patients, as I personally have an interest in nutrition and diet. At the same time, I think confidence increases when pharmacists have access to updated product knowledge and clear guidance, because specialised nutrition can involve very different patient groups and needs."

Similarly, the participant from Denmark highlighted that confidence is strengthened through education and evidence-based guidance, alongside regular patient education, follow-up and practical counselling:

"I feel confident supporting these patients, particularly through patient education, follow-up and practical guidance. However, continuous education and evidence-based guidance are important to maintain confidence in this developing area."

In contrast, participants from Portugal and Greece described more moderate levels of confidence. In Portugal, confidence was described as varying according to the clinical situation, with greater uncertainty reported in more complex cases, such as patients with impaired renal function or those receiving palliative care, as well as when advising on product characteristics such as flavour and texture. In Greece, the participant linked lower confidence to limited exposure to adult specialised nutrition products in practice and limited involvement in prescribing decisions. The participant also highlighted the limited emphasis placed on nutrition within undergraduate pharmacy education, which was perceived to contribute to lower confidence when counselling patients requiring adult specialised nutrition:

"Nutritional education falls under the elective courses in pharmacy schools, and more education is needed. This affects the confidence while counselling patients that require specialised nutrition."

Across the participating countries, pharmacists consistently identified education and training as important factors influencing confidence. Greater emphasis on nutrition during undergraduate pharmacy education, together with continuing professional development and practical guidance, was considered essential to help pharmacists feel more confident in supporting patients requiring adult specialised nutrition. Participants also linked confidence directly to the availability of professional support and well-defined referral pathways, particularly where access to dietitians and/or general practitioners enabled more complex cases to be referred appropriately rather than managed in isolation.

4 Supporting patients throughout the nutrition journey

Building on the participants' reflections on current practice, this chapter examines where pharmacists can make the greatest contribution throughout the patient nutrition journey, from identifying patients who may benefit from specialised nutrition and supporting the initiation of nutritional interventions to promoting adherence and providing follow-up throughout the course of care.

4.1 Identification and initiation of nutritional interventions

Participants generally agreed that pharmacists can contribute across the nutrition journey, from identifying patients at nutritional risk to supporting long-term adherence, although views differed on the stages at which pharmacists can contribute most effectively. Participants from Spain described pharmacists as contributing across the entire nutrition journey, from identifying nutritional risk to promoting adherence and monitoring outcomes. In the UK, specifically England, the participant considered identification and adherence to be particular strengths, while initiation was seen as more dependent on specialist dietetic knowledge. The participant also highlighted that patients are often weighed in pharmacy practice for medication dosing purposes, and that these encounters may also provide an opportunity to recognise unintentional weight loss and identify patients at risk of malnutrition.

Participants from Denmark and Norway similarly highlighted identification as a key strength, describing frequent early contact with patients and their relatives, often before a formal clinical assessment has taken place. This enables pharmacists to recognise repeated purchases, concerns about poor appetite or issues raised by family members, initiate appropriate nutritional support through counselling, and encourage timely referral where appropriate. In Norway, the participant also highlighted the importance of guiding patients towards appropriate follow-up, including referral to their general practitioner when prescription-based nutritional products may be suitable, helping to ensure continued monitoring and reduce financial barriers associated with nutritional products.

"Pharmacists may have particularly strong impact at the identification stage, because we often meet patients and relatives before the situation has been formally assessed elsewhere."

The participant from Switzerland described identification as the main stage at which pharmacists can contribute, highlighting the opportunity to recognise patients who may benefit from adult specialised nutrition at an early stage. The participant also explained that pharmacists can facilitate access to adult specialised nutrition by helping patients prepare the documentation required for health insurance authorisation before referral to the prescribing physician, helping to streamline what was described as a complex administrative process.

The participant from Greece described a more limited role in treatment initiation, as oral nutritional supplements are generally prescribed in hospital settings. However, once patients return to the community, pharmacists play an important role in providing practical guidance on product preparation and administration, reinforcing the information provided during hospital care. This continued support was considered particularly important because patients are frequently referred to their community pharmacy for further advice:

"Patients are often advised to visit their community pharmacy for further advice and support. This highlights the importance of community pharmacists being knowledgeable about adult specialised nutrition, even if they are not involved in prescribing or initiating treatment."

4.2 Supporting adherence and follow-up

Participants described a range of ways in which they support patients after adult specialised nutrition has been initiated, with follow-up and multidisciplinary collaboration emerging as central aspects of their role. Support with medicines adherence was widely described as an area of pharmacist strength, achieved through helping patients select flavours and textures they are more likely to tolerate over time, providing practical advice on product use, and following up on whether products are being used as intended.

Participants from Spain emphasised the importance of direct communication between community pharmacies and primary healthcare centres, including physicians, nurses, dietitians and social workers, recognising that pharmacists often identify wider concerns such as frailty, loneliness or social vulnerability alongside nutritional needs. The participant from Portugal described close collaboration with licensed dietitians working within the pharmacy several times a week, allowing pharmacists to discuss individual patients and strengthen multidisciplinary care. The participant also highlighted the role of pharmacists in supporting patients with the practical aspects associated with adult specialised nutrition products, which include navigating administrative requirements linked to prescribing and reimbursement pathways.

The participant from Denmark highlighted how regular contact with patients enables pharmacists to provide ongoing follow-up, support adherence to adult specialised nutrition interventions, and contribute to continuity of care in collaboration with other healthcare professionals. The participant also described this ongoing follow-up as an important contribution of community pharmacy in supporting primary care:

"One of the greatest strengths of community pharmacy is regular patient contact. This creates opportunities to follow up on weight development, discuss barriers to adherence, motivate patients, and adjust recommendations in collaboration with the patient's physician or dietitian."

Similarly, in Norway, follow-up extended beyond direct patient contact to collaboration with home care services and supported housing staff, who may seek advice from pharmacists when patients have more specialised nutritional needs. The participant also highlighted the importance of practical follow-up, including checking whether patients are able to use products as intended, whether the taste and consistency are acceptable, and whether alternative formulations may better support continued use.

"Our collaboration is mostly with home care services or staff in supported housing facilities. Home care services have a certain level of knowledge, but if there are more specialised needs, they may contact us for advice."

The participant from Switzerland also described pharmacists' role in supporting adherence by providing product samples to help patients identify formulations that best match their preferences and needs. The participant emphasised that product acceptability is fundamental to long-term adherence, as patients are more likely to continue using adult specialised nutrition when products are acceptable in terms of taste and palatability:

"It is important to find something the patient says, 'Oh yes, that's great', because they may need to take two or three bottles a day."

The participant from Sweden highlighted the contribution of clinical pharmacists in reviewing potential interactions between medicines and nutritional supplements, particularly for patients with complex conditions such as cancer, helping to optimise both nutritional support and pharmacotherapy.

"They contribute by reviewing and managing potential interactions between medicines and nutritional supplements, helping to ensure safe and effective patient care."

Participants emphasised that continuity of support, rather than a single point of contact, was central to their contribution throughout the patient nutrition journey. This continuity was achieved through practical follow-up with patients and close collaboration with other healthcare professionals, helping to ensure that adult specialised nutrition remained appropriate, acceptable and sustainable over time.

5 Barriers and enablers

Participants identified a range of barriers and enablers influencing pharmacists' ability to deliver adult specialised nutrition services. These are presented in this chapter.

5.1 Barriers limiting pharmacists' contribution

Participants identified a range of barriers that limit pharmacists' real and potential contributions to adult specialised nutrition, including limited education and training, time constraints and workload, clinical, organisational and regulatory barriers, and commercial and structural challenges affecting practice.

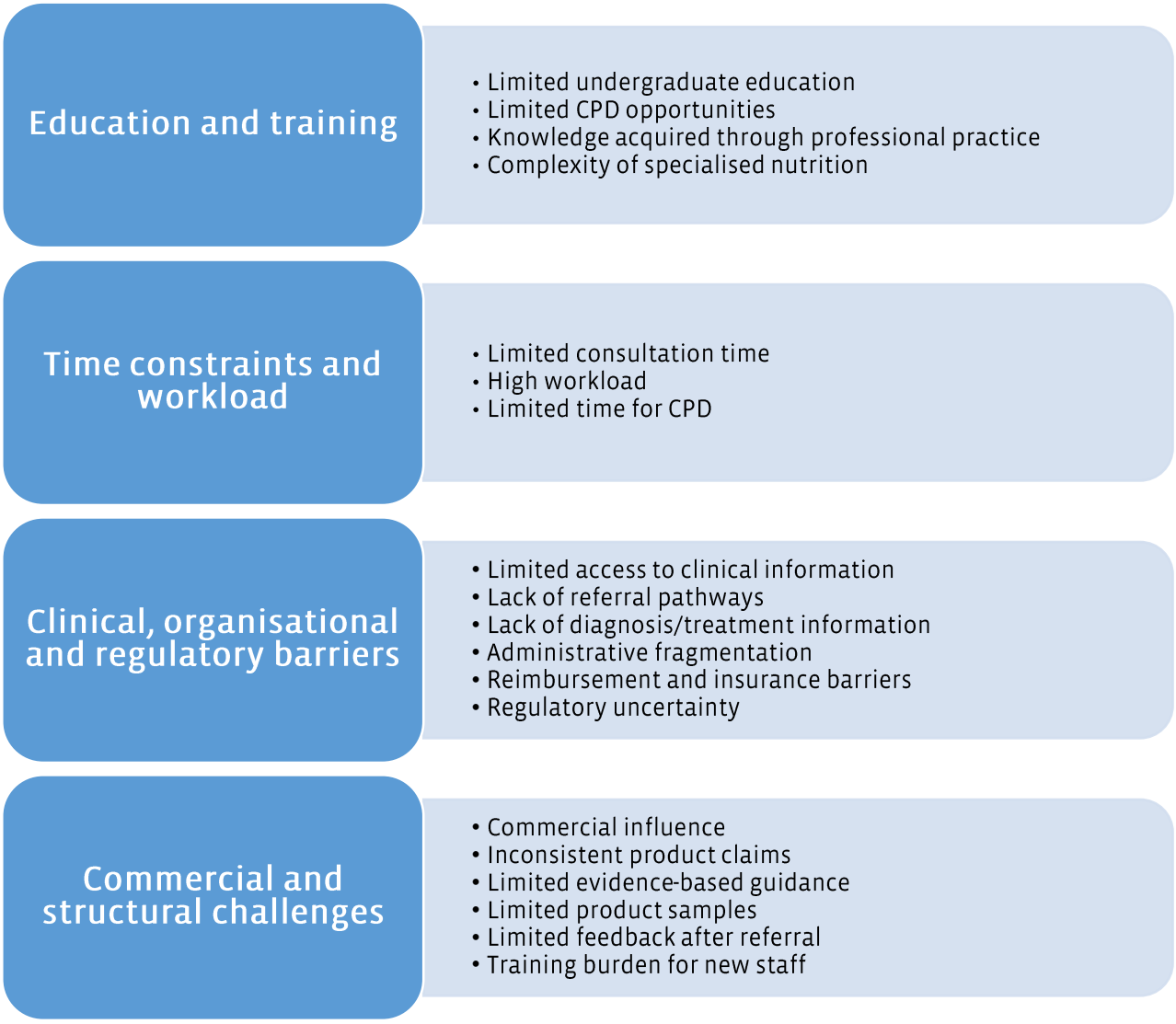

Figure 1. Main barriers limiting pharmacists' contribution to adult specialised nutrition identified by insight board participants.

Education and training

Limited education was the barrier most consistently raised across the participating countries. Participants from the UK (namely England), Spain, Norway, Denmark and Greece agreed that nutrition received limited attention during undergraduate pharmacy education, leaving many pharmacists feeling insufficiently prepared to support patients requiring adult specialised nutrition. The participant from Spain further explained that these educational challenges are compounded by the complexity of adult specialised nutrition,

as products vary considerably according to disease, patient characteristics and nutritional requirements. In addition, reimbursement policies and regulations differ between regions and are frequently updated, making it difficult for pharmacists to remain fully informed.

"In my opinion, the main barrier is education. Clinical nutrition receives relatively limited attention during undergraduate pharmacy education."

Similarly, the participant from Norway reflected on how limited undergraduate education meant that much of the knowledge used in practice had been acquired through professional experience rather than formal training:

"When I was studying, we did not really learn very much about nutrition, so this is knowledge I have acquired through professional practice."

Time constraints and workload

Time constraints were also consistently identified as a major barrier, particularly in community pharmacy. Participants from the UK (England), Norway, Denmark and Portugal described adult specialised nutrition consultations as requiring substantially more time than routine product recommendations, making them difficult to accommodate within existing workloads and staffing levels. Participants also noted that limited protected time for continuing professional development further restricts opportunities to build knowledge and confidence in this area.

Clinical, organisational and regulatory barriers

Participants described several barriers related to healthcare systems and service organisation. Limited access to patients' clinical information was identified in Portugal and Spain as a significant obstacle to providing personalised nutritional support. Participants also highlighted that the absence of a clear diagnosis, treatment plan or documented advice from other healthcare professionals can make it more difficult for pharmacists to determine the most appropriate nutritional recommendations and when referral is required.

Participants also identified a range of organisational barriers affecting the delivery of adult specialised nutrition services. In Norway and Denmark, participants emphasised that the absence of clear referral pathways and structured collaboration with physicians and dietitians can make it difficult for pharmacists to determine when to provide advice independently and when referral is more appropriate. The participant from Denmark also identified limited public awareness of malnutrition and the lack of structured reimbursement for nutritional follow-up services as additional barriers to expanding pharmacists' contribution.

"The main barriers include limited awareness of malnutrition among patients, lack of systematic referral pathways between community pharmacies, physicians and dietitians, and limited reimbursement or structured services for nutritional follow-up."

Similarly, the participant from Poland highlighted the absence of clear clinical pathways, validated screening tools and structured reimbursement as barriers to integrating adult specialised nutrition into routine patient care.

Lack of regulatory clarity was identified as a further challenge in Greece, where the participant described unclear boundaries regarding the respective roles of pharmacists, dietitians and nutritionists in advising on oral nutritional supplements, leaving pharmacists uncertain about the scope of their professional responsibilities.

The participant from Switzerland identified pharmacists' limited knowledge of adult specialised nutrition products and the high cost of these products, together with incomplete insurance coverage, as important barriers to both patient access and pharmacists' ability to support adult specialised nutrition effectively.

"Lack of knowledge of the pharmacists and the costs of the products because the insurance does not cover everything."

Commercial and structural challenges

Participants also described the commercial and structural pressures that affect pharmacy practice. The participant from Poland highlighted that the market for food supplements and adult specialised nutrition products is heavily influenced by commercial promotion, making it more difficult for pharmacists and patients to make evidence-based decisions. The participant also noted that, in his experience, only a small proportion of community pharmacies currently provide advanced, evidence-based nutrition services.

Commonly reported challenges included limited access to product samples, which can restrict pharmacists' ability to recommend products based on taste and texture preferences which may consequently impact adherence. Participants also referred to limited feedback from physicians and dietitians following referral, reducing continuity of care and making ongoing follow-up more difficult. In hospital settings, the participant from the UK (England) highlighted the substantial training burden required when pharmacists first join specialised nutrition teams, reflecting the limited nutrition content currently included in many pharmacy curricula.

"My biggest challenge is the training burden when pharmacists first join the team as the nutrition education in universities is minimal."

5.2 Collaboration with other healthcare professionals

Participants consistently described multidisciplinary collaboration as fundamental to the effective delivery of adult specialised nutrition. Across the participating countries, pharmacists emphasised that closer integration with physicians, dietitians and other healthcare professionals is needed to ensure adult specialised nutrition becomes part of coordinated patient care rather than isolated product recommendations. This was reflected in comments from several participants, including:

"In Spain, close collaboration between community pharmacies and primary healthcare centres is essential."

"In Denmark, close collaboration with general practitioners is particularly important. Community pharmacies can help relieve pressure on primary care by providing structured follow-up and identifying patients whose nutritional status is deteriorating despite treatment."

Participants also identified opportunities to strengthen collaboration in practice. The participant from Norway explained that pharmacists often become involved only after patients have been assessed by a physician with limited communication with hospital dietitians, which can hinder multidisciplinary collaboration. Similarly, the participant from the UK (England) highlighted the importance of closer collaboration with hospital dietitians. In Switzerland and Poland, participants emphasised that stronger integration with physicians and dietitians, supported by clear referral pathways, is essential to enable timely identification, appropriate intervention and continuity of nutritional care. In Portugal, close collaboration with nutritionists working within community pharmacy was an example of how multidisciplinary working can strengthen patient support.

5.3 Enablers and system-level support

Alongside identifying barriers, participants highlighted a range of enablers that could strengthen pharmacists' contribution to adult specialised nutrition. These included support from manufacturers, healthcare systems and professional bodies, with participants emphasising that strengthening pharmacists' contribution will require coordinated action across all three.

Support required from manufacturers / industry

Participants recognised that manufacturers already make an important contribution to pharmacist education but emphasised that industry-led education should be complemented by independent, evidence-based training. Participants from Spain suggested that manufacturer-led education should be paired with training delivered by professional organisations, scientific societies and healthcare systems to ensure that guidance remains evidence-based and unbiased.

"Manufacturers currently play an important role by providing education on adult specialised nutritional products. However, this education should be complemented by independent training developed by professional organisations, scientific societies and healthcare systems to ensure evidence-based and unbiased practice."

The participant from Norway suggested that manufacturers could further support pharmacists by maintaining a stronger presence in community pharmacies and by providing regular updates on new products, reimbursement changes and differences between adult specialised nutrition products.

"There is a need for manufacturers to provide clear, accurate and practical training and information on their products to support pharmacists' confidence in advising patients."

The participant from Poland called for greater investment in structured, evidence-based and non-promotional education rather than promotional approaches, with a preference for practical, face-to-face education and ongoing follow-up to reinforce learning. The participant emphasised that manufacturer-supported education should complement, rather than replace, independent professional guidance and should remain evidence-based and free from commercial influence. The participant also highlighted algorithm-based decision-support tools that link chronic conditions and medicines to appropriate nutritional recommendations as a promising, although currently difficult to scale, example of manufacturer-supported practice.

"In Poland, there are currently few pharmacists with sufficient skills in non-communicable diseases and adult specialised nutrition, including selecting appropriate supplements for individual patients. Manufacturers need to invest more in education."

Integrated healthcare systems

Participants emphasised that stronger integration of adult specialised nutrition within healthcare systems is essential to support pharmacists' contribution. Participants from Spain highlighted that pharmacist remuneration remains largely linked to products dispensed rather than professional services and called for healthcare models that recognise and remunerate nutritional assessment, education and follow-up independently of product price, supported by clear national protocols and structured care pathways. The participant from Norway called for better integration between community pharmacies and primary care through agreed referral pathways and shared information resources, ensuring pharmacists are recognised as active members of the nutritional care pathway rather than primarily as suppliers of adult specialised nutrition products. Similarly, the participant from Denmark highlighted the need for community pharmacies to be integrated into multidisciplinary nutritional care pathways alongside structured reimbursement for nutritional follow-up services.

Role of professional bodies

Participants called on professional bodies to strengthen pharmacists' contribution to adult specialised nutrition through clearer scope of practice guidance, evidence-based recommendations and practical professional resources. The participant from Greece called for regulatory bodies to clarify the scope of practice for pharmacists in relation to oral nutritional supplements. The participant from Poland stressed that professional bodies should rely on real-world evidence, evidence-based policy and scientific research when developing guidance, while ensuring that it remains independent of commercial influence. Similarly, the participant from Denmark called for clear professional guidelines, together with practical screening, follow-up tools and patient education materials, to support more systematic multidisciplinary collaboration.

Participants agreed that strengthening pharmacists' contribution to adult specialised nutrition will require coordinated action from manufacturers, healthcare systems and professional bodies. Together, these stakeholders can support pharmacists through high-quality education, integrated care pathways, appropriate professional guidance and practical resources, helping to embed adult specialised nutrition as a routine component of patient care rather than being viewed as an isolated product recommendation. The participant from Portugal summarised this shared view:

"I believe we see ourselves as useful and important in counselling patients on nutrition, and patients increasingly require this type of information. Again, we need education tailored to our needs, grounded in

real cases, delivered by different professionals and coordinated with scientific societies, professional bodies, and industry."

Overall, participants recognised that pharmacists possess many of the competencies required to contribute more fully to adult specialised nutrition. However, realising this potential will depend on coordinated action to strengthen education, multidisciplinary collaboration, clinical pathways and system-level support.

6 Education and resource needs

Beyond identifying challenges, participants discussed the education, guidance and practical resources needed to strengthen pharmacy practice. This chapter explores the types of education, guidance, and resource needs for strengthening pharmacists' contribution to adult specialised nutrition.

6.1 Education, guidance and tools

Education and training

Participants consistently emphasised that pharmacists require more structured, practice-oriented education to support adult specialised nutrition effectively. Across the participating countries, nutrition was described as receiving insufficient attention during undergraduate pharmacy education, despite its increasing importance in patient care. The participant from the UK (England) said that adult specialised nutrition should be treated with the same importance as other clinical areas with clearly defined learning outcomes spanning undergraduate education through to advanced and specialist levels of pharmacy practice.

Practice-oriented guidance and resources

Participants emphasised that education alone is insufficient without practical guidance and resources to support implementation in routine pharmacy practice. They called for case-based education linked to common pharmacy scenarios, supported by clinical guidance, patient counselling materials and practical resources that can be readily applied during consultations. The participant from Norway suggested that practical, pharmacy-focused training should focus on common situations encountered in community pharmacy, such as older adults with poor appetite, patients recovering from illness or surgery, individuals with swallowing difficulties and people struggling to maintain weight, helping pharmacists translate learning into everyday patient care.

"Practical, pharmacy-focused training would be very helpful, especially training that links common patient situations to suitable nutritional products... Case-based learning would make the training more relevant to daily pharmacy practice and easier to translate into patient conversations."

Similarly, the participant from Denmark highlighted the need for continuing professional education, practical patient counselling materials, and national or international clinical guidance specifically addressing the pharmacist's role. The participant from Switzerland recommended beginning with the clinical conditions requiring adult specialised nutrition and the products best suited to them before progressively building towards more advanced knowledge and practice.

"Focus on the basics first, and then, once successfully implemented, gradually build on that knowledge."

Screening tools

Validated screening tools were consistently identified as a priority for strengthening pharmacists' role in the early identification of malnutrition. Participants from Sweden, Greece, Spain and Portugal highlighted the need for simple, standardised tools that can be integrated into routine community pharmacy practice to support the early identification of malnutrition, sarcopenia and frailty, together with timely referral where appropriate. Although existing tools, such as the Malnutrition Universal Screening Tool (MUST), were considered practical and easy to use, participants emphasised that pharmacists require training on how to incorporate screening into everyday consultations, rather than further development of the tools themselves.

"Pharmacists need to be equipped with practical tools to support malnutrition screening in daily practice. Training is required not only on knowledge, but also on how to effectively use screening tools in real-world community pharmacy settings." – Sweden

"Implementing validated, rapid screening protocols in the community pharmacy is crucial. This would allow us to systematically detect malnutrition risks, sarcopenia, or frailty in older adults at an early stage, facilitating timely interventions and referrals before their clinical status significantly deteriorates." – Spain

Digital decision-support

Participants identified digital technologies and decision-support tools as an important opportunity to strengthen pharmacy practice and support different stages of the clinical pathway. The participant from Spain highlighted the potential of artificial intelligence to provide rapid access to reliable, evidence-based information that can support pharmacists' clinical decision-making, including guidance on medicine–nutrition interactions, disease-specific nutritional recommendations, the optimal use of oral nutritional supplements, management of adverse effects, and personalised nutritional counselling. The participant emphasised that these technologies should complement, rather than replace, professional clinical judgement.

"Artificial intelligence has enormous potential to support pharmacists in adult specialised nutrition. These technologies should complement, rather than replace, professional clinical judgement."

The participant from Poland also described the successful use of a structured approach combining decision-support software, patient communication and structured follow-up, demonstrating how digital tools can strengthen evidence-based practice when implemented within clearly defined clinical areas. Such tools may help identify patients at risk, support standardised screening, prompt evidence-based interventions and referrals, and facilitate structured follow-up.[14]

"Pharmacists need clinical prompting software, structured interventions, and evidence-based care pathways. These tools would help proactively identify at-risk patients, standardise care, and improve follow-up and patient outcomes."

6.2 Enabling a more proactive pharmacist role

Participants agreed that enabling pharmacists to adopt a more proactive role requires a shift from responding to patient requests towards systematically identifying people at nutritional risk. The participant from Norway highlighted the importance of simple screening questions, clearer referral pathways and stronger collaboration with primary care and home care services to support earlier intervention.

"Pharmacists could play a more proactive role if we had better routines for identifying patients at risk, such as elderly or frail patients, people with reduced appetite, unintentional weight loss, swallowing difficulties, or increased nutritional needs."

Similarly, the participant from Denmark emphasised that structured follow-up programmes and closer collaboration with primary care would strengthen pharmacists' ability to identify, monitor and support patients requiring adult specialised nutrition.

"Providing pharmacists with structured follow-up programmes and stronger collaboration with primary care would allow us to take a more proactive role in identifying and supporting patients."

Participants also emphasised that a more proactive pharmacist role depends on healthcare systems with appropriate policies, care pathways and remuneration. The participant from Spain highlighted the need for clear national protocols, structured care pathways and remuneration models that recognise nutritional assessment, patient education and follow-up as professional services rather than activities linked solely to product supply.

"In Spain, remuneration for community pharmacies remains largely linked to the products dispensed. This creates a potential conflict between professional cognitive services and product-based reimbursement. Future healthcare models should recognise and remunerate pharmacists for providing professional nutritional assessment, patient education and follow-up, independently of the price of the nutritional products supplied."

Similarly, the participant from the UK highlighted the importance of dedicated funding in both community and hospital settings in England and of recognising adult specialised nutrition as a priority area within pharmacy practice, comparable to other therapeutic areas, rather than as an add-on to existing workload.

7 Looking ahead: strengthening adult specialised nutrition practice

This chapter explores participants' perspectives on what an effective adult specialised nutrition support pathway should look like within community pharmacy practice and the role that professional organisations, including FIP, can play in strengthening pharmacists' contribution to this area.

7.1 Characteristics of an effective adult specialised nutrition support pathway

Participants consistently described an effective adult specialised nutrition support pathway as one based on early identification, structured assessment, multidisciplinary collaboration, practical counselling on appropriate adult specialised nutrition interventions, documentation where appropriate, and ongoing follow-up. Rather than responding only after nutritional problems become established, participants emphasised that pharmacists should play a proactive role in identifying patients at nutritional risk, providing evidence-based advice, monitoring progress and referring patients when appropriate.

The participant from Denmark described an effective pathway as one that begins with early identification of nutritional risk and ensures timely intervention before significant weight loss develops, with pharmacists recognised as active members of the multidisciplinary healthcare team alongside physicians, dietitians and municipal healthcare services. Through counselling, monitoring and ongoing support, pharmacists can help improve adherence, quality of life and clinical outcomes while reducing complications and hospital readmissions.

"Community pharmacists should be recognised as active members of the multidisciplinary healthcare team, working closely with physicians, dietitians and municipal healthcare services."

The participant from Spain emphasised that community pharmacies are often the most accessible healthcare setting for patients requiring adult specialised nutrition and highlighted the importance of pharmacists continuing to strengthen their expertise in adult specialised nutrition to deliver high-quality, patient-centred care. The participant also outlined the key components of an effective adult specialised nutrition support pathway.

"An effective pathway should include early identification of patients at nutritional risk, standardised nutritional assessment, evidence-based recommendations, close monitoring of adherence, systematic follow-up, and effective communication with the patient's multidisciplinary healthcare team."

The participant from Poland added that effective pathways should take into account specific diseases and medicines, enabling pharmacists to proactively identify at-risk patients, provide targeted nutritional support, monitor outcomes and refer patients when appropriate.

Participants also emphasised that successful implementation of such pathways requires appropriate education and training, multidisciplinary collaboration and gradual integration into routine practice. The participant from Switzerland highlighted that good education should be complemented by close collaboration with dietitians and primary care physicians. The participant also emphasised the importance of starting with the fundamentals and implementing nutrition services progressively, allowing pharmacists to build confidence as the pathway becomes established.

The participant from Norway highlighted the importance of ongoing follow-up, recognising that patients may need to try different flavours, textures or product formulations before finding a nutritional solution they can use consistently.

The participant from Portugal suggested that implementation should be guided by the best available scientific evidence and initially focus on the most common patient groups to ensure that the pathway remains practical and feasible to implement.

7.2 Role of professional organisations

Participants identified a clear role for professional organisations, including FIP, to strengthen pharmacists' contribution to adult specialised nutrition through international leadership, education, practical guidance and advocacy. Across several countries, participants emphasised that FIP is well placed to translate the growing evidence base into practical resources that support pharmacists in everyday practice while enabling adaptation to different national healthcare systems.

Participants from Spain, Norway and Denmark called for the development of international evidence-based guidance, continuing professional education, practical training resources, examples of best practice, and competency frameworks that clearly define the knowledge and skills expected of pharmacists working in adult specialised nutrition. Participants also highlighted the importance of promoting multidisciplinary collaboration and raising awareness among healthcare professionals and policymakers of pharmacists' contribution to adult specialised nutrition.

"Organisations such as FIP could support pharmacists by recognising adult specialised nutrition as an important part of pharmacy practice and by developing practical guidance, training resources, and international best-practice examples."

Participants also highlighted the importance of supporting implementation at a national level. The participant from Greece called for pharmacist education together with practical online tools to support the identification of patients at risk of malnutrition. The participant from Poland suggested that FIP could develop practical guidance linking medicines, disease areas and nutritional risk, particularly for patient groups such as those receiving oncology treatments, people with dysphagia, gastrointestinal disorders and polypharmacy. These resources could then be adapted by individual countries to reflect their own healthcare systems and patient populations. Similarly, the participant from the UK encouraged FIP to maintain its collaborative approach by working with experts from existing national organisations to avoid duplicating established initiatives.

Participants concluded that strengthening adult specialised nutrition practice will require more than guidance alone. Practical toolkits, education, advocacy and evidence-based resources should be developed to support sustainable implementation and enable pharmacists to provide consistent, safe and effective nutritional care across different healthcare settings. Participants agreed that these resources should remain patient-centred, evidence-based rather than product-focused, adaptable to different healthcare systems, and sufficiently flexible to allow countries to introduce adult specialised nutrition services progressively according to their own priorities and contexts.

8 Priorities for action

The insight board discussions identified several priorities to strengthen pharmacists' contribution to adult specialised nutrition and improve their ability to identify, support and follow up patients at nutritional risk. Achieving this will require coordinated action across the pharmacy profession, healthcare systems, professional organisations, educators and industry.

FIP

- Develop international, evidence-based guidance, global toolkits, competency frameworks and practical resources that countries can adapt to their own contexts.
- Facilitate international exchange of good practice and experience, including through digital events, information-sharing forums and professional networks.
- To advocate for greater recognition of pharmacists' role in adult specialised nutrition.
- To support research into the impact of pharmacist-led adult specialised nutrition services on patient outcomes.

National pharmacy organisations

- Adapt international guidance, tools and training resources to national regulatory frameworks and practice settings.
- Work with regulators and healthcare systems to clarify pharmacists' scope of practice in adult specialised nutrition.
- Promote the integration of adult specialised nutrition within pharmacy practice development initiatives.
- Support the development of national referral pathways and communication channels between pharmacists, physicians and dietitians.

Healthcare systems and regulators

- Clarify the roles and responsibilities of pharmacists, dietitians and other healthcare professionals in adult specialised nutrition.
- Recognise and remunerate nutritional assessment, counselling and follow-up as professional pharmacy services, rather than relying solely on product-based reimbursement.
- Integrate pharmacists into multidisciplinary adult specialised nutrition support pathways.
- Invest in validated screening tools and digital decision-support systems for community pharmacy.

Manufacturers

- Provide evidence-based, non-promotional education and product information that supports pharmacists' counselling and patient-facing role.
- Provide ongoing educational support that helps pharmacists apply new knowledge in practice.
- Collaborate with professional organisations and healthcare systems to promote consistent, evidence-based messaging.

Pharmacy education providers

- Strengthen adult specialised nutrition within undergraduate and postgraduate pharmacy education.
- Provide practical, case-based training linked to validated screening tools and common patient scenarios.
- Support flexible, accessible learning formats that pharmacists can complete alongside busy professional workloads.

9 Conclusions

Globally, adult specialised nutrition is becoming an increasingly important part of pharmacy practice across both hospital and community settings. Pharmacists are well placed to help identify patients at nutritional risk, provide practical support, promote adherence and contribute to multidisciplinary nutritional care. Although the organisation of adult specialised nutrition services varies considerably across healthcare systems, participants consistently recognised pharmacists as accessible healthcare professionals who are often among the first to identify nutritional concerns and support patients throughout their care journey.

Participants described pharmacists as contributing across the nutrition journey—from early identification and patient education to adherence support, follow-up and collaboration with other healthcare professionals. However, the extent of this contribution remains highly dependent on national healthcare systems, regulatory frameworks, education and opportunities for multidisciplinary collaboration.

Conversely, participants identified practical education and training, validated screening tools, clear professional guidance, digital decision-support tools and stronger multidisciplinary collaboration as key enablers for improving practice.

Strengthening pharmacists' contribution to adult specialised nutrition will require coordinated action across the pharmacy profession and the wider healthcare system. Participants highlighted an important leadership role for FIP and national professional organisations in developing evidence-based guidance, practical resources, competency frameworks, advocacy, and opportunities for international collaboration. They emphasised that implementation should be progressive, building pharmacist confidence step by step through education, clear pathways and practical tools, while allowing countries to adapt approaches according to their own healthcare systems and professional contexts. Achieving this will also require engagement from healthcare systems, educators, manufacturers and policymakers to support the integration and sustainability of adult specialised nutrition services within pharmacy practice.

This insight board demonstrates that pharmacists across diverse healthcare systems are already making meaningful contributions to adult specialised nutrition, although the extent of their involvement varies between countries and practice settings. Participants consistently recognised that pharmacists are not seeking to replace other healthcare professionals, but to strengthen multidisciplinary nutritional care through their accessibility, medicine expertise and ongoing relationships with patients. As healthcare systems increasingly prioritise disease prevention and progression, healthy ageing and person-centred care, pharmacists are well positioned to play a greater role in adult specialised nutrition. Equipping pharmacists with education, practical tools and collaborative pathways, and introducing professional recognition, can strengthen nutritional care, improve patient outcomes, and help establish adult specialised nutrition as an integral component of pharmacy practice worldwide.

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