Bridging Nutrition Science and Practice: A Clinical Tool for Diet Quality Screening

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COMMENTARY

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INTRODUCTION

Over two thousand years ago, the ancient Greek physician Hippocrates declared, "Let food be thy medicine and medicine be thy food" emphasizing the power of nutrition in healing and disease prevention [1]. This ancient insight is experiencing renewed emphasis in modern healthcare, as poor diet quality has become a leading global driver of preventable disease and mortality. Current research has elevated the importance of diet quality patterns in overall health to a new level. Notably, the landmark 2019 Global Disease Determinants Study, led by the Institute for Health Metrics and Evaluation, identified poor diet quality as the strongest correlate of global allcause mortality and disease risk [2]. In response, healthcare organizations and public health initiatives – such as the Food is Medicine initiative – are calling for diet quality to be treated as a central, measurable component of routine clinical care [3, 4].

This growing body of evidence affirms that diet exerts a profound influence on overall health and wellbeing. Integrating food- and behavior-based interventions into clinical practice is increasingly recognized as essential for the prevention, management, and treatment of dietrelated chronic conditions and for promoting health equity [4]. Routine assessment and counseling on diet quality in primary care settings would benefit most individuals, yet such practices remain infrequently implemented. Although clinicians are well positioned to facilitate behavior change, assessment is seldom incorporated dietary into standardized clinical workflows [5]. Most clinicians frequently encounter persistent barriers to the implementation of dietary counseling in routine care, including constrained time and workflow demands, insufficient training in nutrition counseling, ambiguity regarding which dietary behaviors to address, limited confidence, perceptions that nutrition counseling falls outside their professional scope, and the absence of brief, validated, and pragmatic screening tools to facilitate structured clinical dialogue [4, 5].

Diet quality screening assessment tools are a core mechanism to bridge the gap between nutrition science and clinical practice. These tools are designed to help clinicians—especially non-Registered Dietitian Nutritionists (non-RDNs)—efficiently evaluate dietary patterns, initiate patient-centered conversations about behavior change, and tailor brief interventions or referrals to registered dietitian nutritionists (RDNs) when appropriate. Clinical discussion tools like these can provide actionable insights in real-time, support motivational interviewing strategies, and promote continuity of care by documenting and tracking dietary progress across visits. However, despite growing evidence and enthusiasm, diet quality assessment tools that are practical to implement in a clinical setting are lacking [4, 5, 6]. This limits clinicians' ability to offer meaningful dietary guidance, particularly in high-volume primary care and preventive medicine environments.

To address this gap, our commentary highlights the development and application of the Food Quality Screener (FQS)—a practical, evidence-informed clinical discussion tool that is both understandable and actionable. The FQS has been successfully pilot-tested and integrated into clinical settings with non-RDN clinicians to rapidly screen for diet quality in patients without substantially requiring more time, and advanced education for clinicians [7, 8]. The FQS enables non-RDN clinicians to quickly assess diet quality using a user-friendly, behaviorally grounded format, and serves as a gateway for productive, personalized counseling with their patients that align with preventive care goals.

The Case for the Food Quality Screener

A recent American Heart Association (AHA) study reviewed 15 brief screening assessment tools in terms of their validity, reliability, and usability in clinical settings [6]. While three of the tools, including the Mediterranean Diet Adherence Screener (MEDAS), Starting the Conversation, (STC), and the Rapid Eating Assessment for Participants-Shortened version (REAP-S) reviewed received positive ratings based on their 10 theoretical and practice-based criteria and benchmarks, the authors concluded that there were several limitations for using these tools to assess diet quality among diverse populations. The five theoretical factors included (1) evaluation of total diet quality, (2) testretest reliability, (3) validity appraised against another dietary assessment method, (4) validity assessed within multiple U.S. adult populations aged 20-75 years, across diverse racial and socioeconomic, and clinical/nonclinical populations, and (5) validity evaluated on the relationship

between the diet screener tool score and health biomarkers. The five practice-based factors included (1) a brief tool (takes < 10 min to complete), (2) clinical decision support for immediate guidance or more intensive nutrition or behavioral therapies, (3) sensitive to dietary, behavioral changes over time, (4) an easily completed and administered tool without special knowledge or software, and (5) useful information for chronic disease management (i.e., patients/clients interpretation and understanding of the score and ways to improve their score). Additionally, none of the tools reviewed were informed by behavioral theory or models. Clinicians know it is critical to explain why and how behavioral changes need to be made to their patients. The AHA statement emphasized the urgent need for the development of a rapid dietary assessment screening tool focusing on clinically relevant food groups that meets their theoretical and practice-based criteria along with be grounded in behavioral theory.

Guided by these benchmarks, we developed the Food Quality Screener (FQS)—a brief, aesthetically pleasing, score-based, easy-to-interpret tool that guides assessment and counseling, that has been successfully pilot tested with clinicians in a university-based Healthy Lifestyle Center that serves both clinical and community populations (Figure 1). Designed for self-administration, the FQS consists of 11 items on a single double-sided page. The first six items measure food groups with protective health associations (vegetables, fruits, whole grains, nuts and seeds, beans, fish) and the next five items measure (using reverse scoring) adverse health associations (sugary drinks and snacks, processed meats, high sodium foods, and alcohol). The food groups were adapted from the widely used Alternative Healthy Eating Index, a validated metric for predicting chronic disease risk [9]. Responses to these 11 items make up a food quality score. This score is simple to calculate and understand, making it useful for both self-assessment and clinician counseling. One's food quality score is readily interpretable for patients and clinicians as it is quickly converted "at-a-glance" using a five-level numerical and color-coded classification system (excellent-to-poor) table on the backside. This visual representation and system were

designed to allow for dietary habit counseling on any of the specific food groups.

Recognizing time and workflow as major clinical barriers, we prioritized minimal provider and patient burden in the tool's design. The FQS is quick and easy to administer, taking three minutes or less to complete. Since the FQS can be self-administered, the patient could complete it at home or in the waiting room before seeing the clinician. Our suggested frequency of food group consumption scoring option of "never/rarely", "sometimes", and "often/always" provides targeted dietary counseling on specific food groups where the patient can improve, and dietary changes are easily scored allowing the results to be followed over time. Each dietary behavior assessed based on a specific food group consumption has the potential to positively impact health outcomes. As care discussions shift from baseline assessment to long-term goals, the FQS supports an individualized and achievable path to dietary improvement based on six food groups to encourage and five food groups to limit. The tool fosters an ongoing dialogue between clinicians and patients about nutrition using behavioral theory, guiding personalized recommendations and empowering patients to make sustainable dietary changes. For instance, providers may use the FQS to structure goals like healthier grocery shopping or improved meal planning.

An important phase in creating and designing the FQS was to base it on behavioral theory to improve discussions between clinicians and patients. Lifestyle counseling designed for adult learners is most effective when it has a foundation based on a behavior change, as models best explain health-related behaviors [10]. The transtheoretical model (TTM) was selected based on its 'stages of change' core construct that classifies based on individuals' readiness to change [11]. The preaction stages of readiness (precontemplation, contemplation, and preparation based on the information provided on the reverse side of the FQS. First, diet quality awareness is gained from a food quality score and the importance of food quality in promoting health and preventing chronic disease may prompt a transition from precontemplation (a healthier behavior is not yet considered) to contemplation

(thinking about behavior change) that is introspective in terms of what one eats and drinks and the impact on one's health. Second, to assess if individuals are in the preparation stage (intending to change behavior) a section on "One change at a time" includes two yes-or-no questions. These questions assess the patient's readiness to make a small dietary change to their diet in the next month and/or seek professional counseling. Responses to these two questions responses guide the clinician on how best to counsel the patient based on their readiness to welcome counseling and advice. This section awakens the patients' consciousness and willingness to start a discussion about dietary quality behaviors as a key aspect of preventive medicine, encouraging meaningful behavior change. This provides an opportunity for discussion on small and actionable eating habit changes between patients and providers.

CLINICAL IMPLICATIONS AND CONCLUSION

This brief commentary was meant to affirm the need to bridge the gap between nutrition science and practice by providing a clinical tool for diet quality screening. We shared a promising example of a clinical tool that would support fruitful patient-provider dialogue about dietary behaviors and behavioral goals. Clinical discussion tools have the potential to enhance the promotion of healthy dietary behaviors between providers and adults who access care. Based on our experience, the FQS is a simple, practical tool that could be integrated into clinical practice by patient providers to rapidly screen diet quality, without markedly demanding more time, or the need for advanced nutrition education and resources. The FQS provides an opportunity for providers in meetings with their patients to easily and accurately assess current dietary behaviors that are clinically relevant, briefly counsel on behavior change strategies for specific food groups, prescribe targets for behavioral change, and refer to other professionals (e.g., RDNs) or programs if needed. The FQS results could be integrated into an electronic health record and followed over time and would be easily available to other clinicians caring for the patient.

Table 1 outlines six practical and actionable strategies that clinical settings and clinicians can adopt to enhance patient care through the implementation of the FQS. These recommendations are organized to support both implementation and improved patient outcomes. Each proposal supports integration into clinical workflow, promotes personalized nutrition counseling, and advances chronic disease management.

Although further research is warranted to evaluate the implementation of the Food Quality Screener (FQS) across diverse clinical settings, our experience indicates that it is both feasible and practical for use in high-demand healthcare environments. The FQS enables non-RDNs clinicians to quickly identify dietary patterns—specifically food groups that support health or contribute to disease risk—and offers both patients and providers with clear, actionable feedback. This supports informed clinical decision-making and facilitates personalized nutritional counseling within the constraints of routine care.

We conclude this commentary by returning to its conceptual foundation and offering a reframed interpretation of Hippocrates' timeless statement with a modern refinement. By adding a single word—"quality"—to the phrase "Let food be thy medicine and medicine be thy food," we underscore a vital distinction: not all food possesses equal therapeutic potential. The revised quote, "Let quality food be thy medicine and medicine be thy quality food," reinforces the idea that it is the quality of food—nutrient-dense, minimally processed, whole foods that holds the greatest promise for promoting well-being and preventing disease.

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PEER REVIEW

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Figure 1. The Food Quality Screener (Front Side)



1 In a typical week, how often do you:	Never/ Rarely	Some- times	Often/ Always
1. Eat 2 or more servings of vegetables a day (not including potatoes)?	0	1	2
2. Eat 2 or more servings of fruit a day (not including fruit juice)?	0	۱ 🗌	2
3. Eat 2 or more servings of whole grains a day? Examples: oats, brown rice, whole grain bread, cereal, and pasta	0	1	2
 Eat 1 or more servings of nuts, seeds, or nut butters a day? Examples: peanuts, walnuts, chia and flax seeds, peanut butter 	0	1	2
 Eat 1 or more servings of beans or lentils a day? Examples: pinto, black, and soy beans, chickpeas 	0	1	2
6. Eat 2 or more servings of fish a week?	0	1	2
 Drink 1 or more servings of sugary drinks a day? Examples: soda, sports and energy drinks, coffee and tea with sugar 	2	ו 🗌	0 []
 Eat 1 or more servings of sugary snacks or sweets a day? Examples: candy, cakes, cookies, pies, doughnuts 	2	י 🗆	0
 Eat 1 or more servings of red or processed meat a day? Examples: beef, pork, lamb, hot dogs, sausages, bacon 	2	۱ 🗌	0
 Eat 1 or more servings of high sodium processed foods a day? Examples: canned soup, pizza, chips, fast-food sandwiches 	2	י 🗆	0
11. Drink more than 1 alcoholic drink a day?	2	1	0
2 Add up your points for each column			

Check the back to get your results

Figure 1. The Food Quality Screener (Back Side)

3 Put your 3 totals below. Add the numbers to get Your Score.

		+	+ :	=	
'Never to	/Rarely' Ital	'Sometimes' total	'Often/Always' total	Your Food Quality Score	
Excellent	19 - 22	 Food Quality Scores Scores go from 0 to 22. A higher score means you eat more high-quality foods and less low-quality foods. Food Quality Matters High-quality foods help you feel better and keep your mind and body strong. They lower your chances for getting many diseases like heart disease, stroke, type 2 diabetes, high blood pressure, obesity, mental illness, and some cancers. 			
Very Good	16 - 18				
Good	13 - 15				
Fair	7 - 12	Improve You	Improve Your Score Choose high-quality foods when you can.		
Poor	0 - 6	Swap low-quality foods for higher-quality ones. A small change can have a big impact on your health.			

Yes

Yes

No

No

4 One change at a time

- 1. Are you ready to change an eating habit in the next month?
- 2. Are you ready to discuss your results with a health professional?

Disclaimer: This screening tool provides a food quality score for self-assessment and to guide counseling. It does not assess your overall eating pattern or replace professional advice, diagnosis, or treatment. There is not a single best eating pattern for everyone, due to individual differences in age, sex, activity level, gut health, cultural preferences, environmental factors, and food security. Your health status (having special dietary needs or restrictions) can also play a role.

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Table 1. Clinical Applications of the Food Quality Screener		

Implementation Strategy	Clinical Applications
 Integrate FQS into Routine Intake Workflow 	 Administer the FQS during patient check-in, either on paper or electronically via tablet or patient portals. Add FQS scores to the electronic health record (EHR) for tracking and visibility across the care team. Train medical assistants or nurses to prompt FQS completion before the clinician encounter.
2. Use FQS Score to Personalize Counseling	 Use the FQS color-coded categories to start a brief, targeted conversation: <i>"I see your score shows room to improve in [e.g., sugary drinks or vegetables]—what's one small change you'd be open to trying?"</i> Clinicians can frame advice in the context of 'readiness to change' based on the screener's embedded behavior prompts. Build a short-term dietary goal (e.g., "add one vegetable to lunch daily") and revisit at follow-up.
3. Make FQS Part of a Team-Based Care Model	 Non-RDN clinicians can use the FQS to refer patients to nutrition services. Health coaches, nurses, or community health workers can use the score to guide ongoing behavior change support. Refer to RDNs when scores suggest high-risk patterns or patients express interest in deeper counseling.
 Support Chronic Disease Prevention and Management 	 Link FQS patterns to specific outcomes (e.g., high sodium intake and hypertension, sugary drinks and diabetes). Use FQS scores to document dietary risk as part of cardiovascular disease or obesity treatment plans. Tailor nutrition advice as part of standard care plans for hypertension, diabetes, dyslipidemia, and obesity.
5. Track Progress Over Time	 Re-administer the FQS at regular intervals (e.g., annually, every 6 months, or at wellness visits). Compare scores over time to assess behavior change and guide further counseling. Use progress to motivate patients, showing them, how small changes add up.
6. Educate and Empower Clinicians	 Provide brief training modules or quick-reference guides for interpreting and discussing FQS results. Emphasize that perfection is not the goal—any improvement can lead to health benefits. Reframe diet quality discussions from overwhelming to manageable and empowering.